TOSHIBA

FILE NO. 023-200310

SERVICE MANUAL

COLOR TELEVISION

N2PSP Chassis

50H13

(TAC0360)

– SUMMARY –

50H13 is the same as 50H82 except for the parts tabled on back of this sheet.
Use this service manual together with the service manual of 50H82, 65H82 (File No. 020-200207).

REPLACEMENT PARTS LIST DIFFERENCES

Location No.	Part No.	Description
A001	23411921	Cabinet, Wood Cabinet Shipment
A102	23527240	Grille, Speaker Grille Assembly
A202	23450684	Panel, Control Panel Assembly
A213	23428213	Door, Door Proper
A701	23067277	Carton
C201	24203100	EL, 10μF, ±20%, 16V
C202	24100104	Chip, 0.1μF, +80%, -20%, 25V
C203	24100104	Chip, 0.1μF, +80%, -20%, 25V
C204	24100104	Chip, 0.1μF, +80%, -20%, 25V
C205	24100104	Chip, 0.1μF, +80%, -20%, 25V
C206	24100104	Chip, 0.1μF, +80%, -20%, 25V
C207	24203100	EL, 10μF, ±20%, 16V
C208	24100104	Chip, 0.1μF, +80%, -20%, 25V
C209	24100104	Chip, 0.1μF, +80%, -20%, 25V
C210	24100104	Chip, 0.1μF, +80%, -20%, 25V
C212	24203100	EL, 10μF, ±20%, 16V
C213	24100104	Chip, 0.1μF, +80%, -20%, 25V
C214	24100104	Chip, 0.1μF, +80%, -20%, 25V
C215	24100104	Chip, 0.1μF, +80%, -20%, 25V
C216	24203100	EL, 10μF, ±20%, 16V
C217	24100104	Chip, 0.1μF, +80%, -20%, 25V
C218	24100104	Chip, 0.1μF, +80%, -20%, 25V
C219	24109103	Chip, 0.01μF, ±10%
C220	24206479	EL, 4.7μF, ±20%, 50V
C221	24203100	EL, 10μF, ±20%, 16V
C222	24100104	Chip, 0.1μF, +80%, -20%, 25V
C223	24100104	Chip, 0.1μF, +80%, -20%, 25V
C224	24100104	Chip, 0.1μF, +80%, -20%, 25V
C225	24203100	EL, 10μF, ±20%, 16V
C226	24100104	Chip, 0.1μF, +80%, -20%, 25V
C227	24100104	Chip, 0.1μF, +80%, -20%, 25V
C228	24100104	Chip, 0.1μF, +80%, -20%, 25V
C229	24100104	Chip, 0.1μF, +80%, -20%, 25V
C230	24100104	Chip, 0.1μF, +80%, -20%, 25V
C231	24100104	Chip, 0.1μF, +80%, -20%, 25V
C232	24203100	EL, 10μF, ±20%, 16V
C233	24109103	Chip, 0.01μF, ±10%
C236	24100104	Chip, 0.1μF, +80%, -20%, 25V
C237	24100104	Chip, 0.1μF, +80%, -20%, 25V
C238	24203100	EL, 10μF, ±20%, 16V
C239	24100104	Chip, 0.1μF, +80%, -20%, 25V
C240	24100104	Chip, 0.1μF, +80%, -20%, 25V
C241	24100104	Chip, 0.1μF, +80%, -20%, 25V
C242	24100104	Chip, 0.1μF, +80%, -20%, 25V
C243	24203100	EL, 10μF, ±20%, 16V
C244	24100104	Chip, 0.1μF, +80%, -20%, 25V
C245	24105560	Chip, 56pF
C246	24105150	Chip, 15pF
C247	24105270	Chip, 27pF
C248	24105101	Chip, 100pF
C249	24105820	Chip, 820pF
C250	24105560	Chip, 56pF
C251	24105150	Chip, 15pF
C252	24105270	Chip, 27pF
C253	24105101	Chip, 100pF
C254	24105820	Chip, 820pF
C255	24105560	Chip, 56pF
C256	24105150	Chip, 15pF
C257	24105270	Chip, 27pF

Location No.	Part No.	Description
C258	24105101	Chip, 100pF
C259	24105820	Chip, 820pF
C260	24203100	EL, 10μF, ±20%, 16V
C261	24203100	EL, 10μF, ±20%, 16V
C262	24100104	Chip, 0.1μF, +80%, -20%, 25V
C263	24100104	Chip, 0.1μF, +80%, -20%, 25V
C264	24105100	Chip, 10pF, ±0.5pF
C265	24105100	Chip, 10pF, ±0.5pF
C266	24105100	Chip, 10pF, ±0.5pF
C267	24100104	Chip, 0.1μF, +80%, -20%, 25V
C268	24105101	Chip, 100pF
C269	24105101	Chip, 100pF
C272	24100104	Chip, 0.1μF, +80%, -20%, 25V
C273	24100104	Chip, 0.1μF, +80%, -20%, 25V
C801	24203101	EL, 100μF, ±20%, 16V
C802	24203100	EL, 10μF, ±20%, 16V
C803	24100104	Chip, 0.1μF, +80%, -20%, 25V
C804	24617033	EL, 4.7μF, ±20%, 25V
C805	24203100	EL, 10μF, ±20%, 16V
C806	24100104	Chip, 0.1μF, +80%, -20%, 25V
C820	24763101	EL, 100μF, ±20%, 16V
C821	24092730	Chip, 0.1μF, ±10%, 16V
C822	24763101	EL, 100μF, ±20%, 16V
C823	24109103	Chip, 0.01μF, ±10%
C824	24092730	Chip, 0.1μF, ±10%, 16V
C825	24109103	Chip, 0.01μF, ±10%
C826	24763101	EL, 100μF, ±20%, 16V
C827	24092730	Chip, 0.1μF, ±10%, 16V
CC01	24203100	EL, 10μF, ±20%, 16V
CC02	24100104	Chip, 0.1μF, +80%, -20%, 25V
CC03	24203100	EL, 10μF, ±20%, 16V
CC04	24100104	Chip, 0.1μF, +80%, -20%, 25V
CS03	24109221	Chip, 220pF, ±10%
CS07	24109221	Chip, 220pF, ±10%
CS09	24105331	Chip, 330pF
CS12	24109221	Chip, 220pF, ±10%
CS14	24109221	Chip, 220pF, ±10%
CS15	24105331	Chip, 330pF
CS21	24105101	Chip, 100pF
CS22	24105101	Chip, 100pF
CS24	24105331	Chip, 330pF
CS28	24105331	Chip, 330pF
CS29	24105331	Chip, 330pF
CS34	24105331	Chip, 330pF
CS55	24105331	Chip, 330pF
CS56	24105331	Chip, 330pF
CS57	24105331	Chip, 330pF
CS58	24105331	Chip, 330pF
CS91	24206229	EL, 2.2μF, ±20%, 50V
CS92	24206229	EL, 2.2μF, ±20%, 50V
CS93	24206229	EL, 2.2μF, ±20%, 50V
CS94	24206229	EL, 2.2μF, ±20%, 50V
CS95	24763101	EL, 100μF, ±20%, 16V
CS96	24109103	Chip, 0.01μF, ±10%
CV02	24109103	Chip, 0.01μF, ±10%
CV08	24666471	EL, 470μF, ±20%, 16V
CV09	24666471	EL, 470μF, ±20%, 16V
CV23	24109103	Chip, 0.01μF, ±10%
CV24	24109102	Chip, 1000pF, ±10%
CV30	24109103	Chip, 0.01μF, ±10%

Location No.	Part No.	Description
CV39	24109102	Chip, 1000pF, ±10%
CV46	24109103	Chip, 0.01μF, ±10%
CV62	24109103	Chip, 0.01μF, ±10%
CV66	24105561	Chip, 560pF
CV82	24203470	EL, 47μF, ±20%, 16V
CV83	24203470	EL, 47μF, ±20%, 16V
CV84	24203470	EL, 47μF, ±20%, 16V
CV85	24203470	EL, 47μF, ±20%, 16V
CV86	24203470	EL, 47μF, ±20%, 16V
CV87	24203470	EL, 47μF, ±20%, 16V
CV90	24109103	Chip, 0.01μF, ±10%
CV91	24763101	EL, 100μF, ±20%, 16V
D201	23118041	Diode, MA111
D202	23118041	Diode, MA111
D203	23118041	Diode, MA111
D204	23118041	Diode, MA111
D205	23316573	Diode, Zener, MA8062-L
D206	23316573	Diode, Zener, MA8062-L
D820	23118041	Diode, MA111
D821	23118094	Diode, EU2A
DC01	23118041	Diode, MA111
DC02	23118041	Diode, MA111
DC03	23118041	Diode, MA111
DC04	23118041	Diode, MA111
DS90	23316596	Diode, Zener Chip 11.40-11.96V, MA8120-L, TX
DV01	23316587	Diode, Zener, MA8091-L
DV02	23316587	Diode, Zener, MA8091-L
DV03	23316587	Diode, Zener, MA8091-L
DV07	23316587	Diode, Zener, MA8091-L
DV08	23316587	Diode, Zener, MA8091-L
DV09	23316587	Diode, Zener, MA8091-L
DV11	23316587	Diode, Zener, MA8091-L
DV12	23316587	Diode, Zener, MA8091-L
DV13	23316587	Diode, Zener, MA8091-L
DV17	23316587	Diode, Zener, MA8091-L
DV18	23316587	Diode, Zener, MA8091-L
DV25	23118041	Diode, MA111
DV161	23316587	Diode, Zener, MA8091-L
DV162	23316587	Diode, Zener, MA8091-L
DV163	23316587	Diode, Zener, MA8091-L
DV164	23316587	Diode, Zener, MA8091-L
DV165	23316587	Diode, Zener, MA8091-L
DV166	23316587	Diode, Zener, MA8091-L
GJ13	24000445	Chip Jumper, 1680 Type
GJ91	24000445	Chip Jumper, 1680 Type
GJ92	24000445	Chip Jumper, 1680 Type
GJ93	24000445	Chip Jumper, 1680 Type
GJ97	24000445	Chip Jumper, 1680 Type
GJ98	24000445	Chip Jumper, 1680 Type
GJ201	24000445	Chip Jumper, 1680 Type
GJ202	24000445	Chip Jumper, 1680 Type
GJ203	24000445	Chip Jumper, 1680 Type
GJ204	24011220	Chip, 22 ohm, 1/20W
GJ205	24000445	Chip Jumper, 1680 Type
GJ208	24000445	Chip Jumper, 1680 Type
GJ210	24000445	Chip Jumper, 1680 Type
GJ216	24000445	Chip Jumper, 1680 Type
GJ223	24000445	Chip Jumper, 1680 Type
GJ224	24000445	Chip Jumper, 1680 Type
GJ225	24000445	Chip Jumper, 1680 Type
GJ226	24000445	Chip Jumper, 1680 Type
GJ227	24000445	Chip Jumper, 1680 Type
GJ228	24000445	Chip Jumper, 1680 Type
GJ229	24000445	Chip Jumper, 1680 Type

Location No.	Part No.	Description
GJ230	24000445	Chip Jumper, 1680 Type
K501	23311957	Screen, 50KM Lenticular Sheet, SCREEN50KM-L
K502	23311958	Screen, 50KM Fresnel Sheet, SCREEN50KM-F
L201	23103152	Chip (Ferrite Bead), TEM2133AM
L202	23103152	Chip (Ferrite Bead), TEM2133AM
L203	23103152	Chip (Ferrite Bead), TEM2133AM
L204	23103152	Chip (Ferrite Bead), TEM2133AM
L205	23103152	Chip (Ferrite Bead), TEM2133AM
L206	23103152	Chip (Ferrite Bead), TEM2133AM
L207	23103152	Chip (Ferrite Bead), TEM2133AM
L208	23103152	Chip (Ferrite Bead), TEM2133AM
L209	23103152	Chip (Ferrite Bead), TEM2133AM
L210	23103152	Chip (Ferrite Bead), TEM2133AM
L211	23246191	Chip, Inductor, TRF4R47CG
L212	23246191	Chip, Inductor, TRF4R47CG
L213	23246190	Chip, Inductor, TRF4R39CG
L214	23246191	Chip, Inductor, TRF4R47CG
L215	23246191	Chip, Inductor, TRF4R47CG
L216	23246190	Chip, Inductor, TRF4R39CG
L217	23246191	Chip, Inductor, TRF4R47CG
L218	23246191	Chip, Inductor, TRF4R47CG
L219	23246190	Chip, Inductor, TRF4R39CG
L220	23246191	Chip, Inductor, TRF4R47CG
L221	23246191	Chip, Inductor, TRF4R47CG
L222	23246191	Chip, Inductor, TRF4R47CG
L801	23103152	Chip (Ferrite Bead), TEM2133AM
L802	23103152	Chip (Ferrite Bead), TEM2133AM
L821	23103152	Chip (Ferrite Bead), TEM2133AM
L822	23103152	Chip (Ferrite Bead), TEM2133AM
L823	23103152	Chip (Ferrite Bead), TEM2133AM
LC01	23103152	Chip (Ferrite Bead), TEM2133AM
LS90	23289100	Coil, Peaking, TRF4100A
LV81	23289100	Coil, Peaking, TRF4100A
⚠P801	23372191	Power Cord
Q152	23314204	Transistor, 2SC2412K,Q
Q201	23009234	IC, TFP501
Q202	23009233	IC, THS8200
Q203	23009621	IC, TMP87C809M
Q204	23009371	IC, EPM3032A
Q205	23205151	Transistor, FET, BSN20
Q206	23205151	Transistor, FET, BSN20
Q207	23314163	Transistor, 2SA1162-Y
Q208	23314163	Transistor, 2SA1162-Y
Q209	23314163	Transistor, 2SA1162-Y
Q210	23314204	Transistor, 2SC2412K,Q
Q211	23205151	Transistor, FET, BSN20
Q212	70114402	Transistor, 2SC3437-Y

Location No.	Part No.	Description
Q213	23314204	Transistor, 2SC2412K,Q
Q801	23009236	IC, TPS76918
Q820	23906484	IC, BA033T
Q822	70129444	IC, PST994D
QC01	23009360	IC, AT24C04N-10SI-1.8TEL
QC02	23205151	Transistor, FET, BSN20
QC03	23205151	Transistor, FET, BSN20
QC04	23009360	IC, AT24C04N-10SI-1.8TEL
QC05	23314204	Transistor, 2SC2412K,Q
QS01	70114396	Transistor, 2SC3326B
QS11	70114396	Transistor, 2SC3326B
QS12	23114493	Transistor, RN2404
QS13	23314204	Transistor, 2SC2412K,Q
QS14	23314204	Transistor, 2SC2412K,Q
QS90	23000529	IC, MM1231XD
QV10	23314204	Transistor, 2SC2412K,Q
QV20	23114499	Transistor, RN1404
QV21	23314204	Transistor, 2SC2412K,Q
QV22	23205045	Transistor, 2SA1037AKQ
QV23	23205045	Transistor, 2SA1037AKQ
QV28	23114500	Transistor, RN1403
QV48	23114433	Transistor, 2SC1815-Y
QV49	23114433	Transistor, 2SC1815-Y
QV81	23318438	IC, M52055P
QV83	23205057	Transistor, KTC3875Y
QV91	23205057	Transistor, KTC3875Y
QW17	23114502	Transistor, RN1401
QY260	23314204	Transistor, 2SC2412K,Q
R150	24011101	Chip, 100 ohm, 1/20W
R151	24011562	Chip, 5600 ohm, 1/20W
R152	24011103	Chip, 10k ohm, 1/20W
R201	24011102	Chip, 1k ohm, 1/20W
R202	24872102	Chip, 1k ohm, 1/16W
R203	24872102	Chip, 1k ohm, 1/16W
R204	24011102	Chip, 1k ohm, 1/20W
R205	24011152	Chip, 1500 ohm, 1/20W
R207	24011102	Chip, 1k ohm, 1/20W
R208	24011332	Chip, 3300 ohm, 1/20W
R209	24011332	Chip, 3300 ohm, 1/20W
R210	24011101	Chip, 100 ohm, 1/20W
R211	24011101	Chip, 100 ohm, 1/20W
R212	24011101	Chip, 100 ohm, 1/20W
R213	24011101	Chip, 100 ohm, 1/20W
R214	24011101	Chip, 100 ohm, 1/20W
R215	24011101	Chip, 100 ohm, 1/20W
R216	24011102	Chip, 1k ohm, 1/20W
R217	24011330	Chip, 33 ohm, 1/20W
R218	24011330	Chip, 33 ohm, 1/20W
R219	24011330	Chip, 33 ohm, 1/20W
R220	24011330	Chip, 33 ohm, 1/20W
R221	24011330	Chip, 33 ohm, 1/20W
R222	24011330	Chip, 33 ohm, 1/20W
R223	24011302	Chip, 3k ohm, 1/20W
R224	24872750	Chip, 75 ohm, 1/16W
R225	24872750	Chip, 75 ohm, 1/16W
R226	24872750	Chip, 75 ohm, 1/16W
R227	24872750	Chip, 75 ohm, 1/16W
R228	24872750	Chip, 75 ohm, 1/16W
R229	24872750	Chip, 75 ohm, 1/16W
R230	24011103	Chip, 10k ohm, 1/20W
R231	24011153	Chip, 15k ohm, 1/20W
R233	24011472	Chip, 4700 ohm, 1/20W
R234	24019436	Chip, 22 ohm, 1/16W
R235	24019436	Chip, 22 ohm, 1/16W
R236	24019436	Chip, 22 ohm, 1/16W

Location No.	Part No.	Description
R237	24019436	Chip, 22 ohm, 1/16W
R238	24019436	Chip, 22 ohm, 1/16W
R239	24019436	Chip, 22 ohm, 1/16W
R240	24011101	Chip, 100 ohm, 1/20W
R241	24011102	Chip, 1k ohm, 1/20W
R242	24011101	Chip, 100 ohm, 1/20W
R243	24011102	Chip, 1k ohm, 1/20W
R244	24011101	Chip, 100 ohm, 1/20W
R245	24011102	Chip, 1k ohm, 1/20W
R246	24011101	Chip, 100 ohm, 1/20W
R247	24011101	Chip, 100 ohm, 1/20W
R248	24011101	Chip, 100 ohm, 1/20W
R249	24011101	Chip, 100 ohm, 1/20W
R250	24011101	Chip, 100 ohm, 1/20W
R251	24011101	Chip, 100 ohm, 1/20W
R252	24011101	Chip, 100 ohm, 1/20W
R253	24011473	Chip, 47k ohm, 1/20W
R254	24011472	Chip, 4700 ohm, 1/20W
R255	24011101	Chip, 100 ohm, 1/20W
R256	24011103	Chip, 10k ohm, 1/20W
R257	24011103	Chip, 10k ohm, 1/20W
R258	24011101	Chip, 100 ohm, 1/20W
R259	24011101	Chip, 100 ohm, 1/20W
R829	24011102	Chip, 1k ohm, 1/20W
RB41	24011151	Chip, 150 ohm, 1/20W
RC01	24011101	Chip, 100 ohm, 1/20W
RC02	24011101	Chip, 100 ohm, 1/20W
RC03	24011473	Chip, 47k ohm, 1/20W
RC05	24011103	Chip, 10k ohm, 1/20W
RC06	24011103	Chip, 10k ohm, 1/20W
RC07	24011103	Chip, 10k ohm, 1/20W
RC08	24011103	Chip, 10k ohm, 1/20W
RC09	24011102	Chip, 1k ohm, 1/20W
RC10	24872101	Chip, 100 ohm, 1/16W
RC11	24011222	Chip, 2200 ohm, 1/20W
RC12	24011102	Chip, 1k ohm, 1/20W
RS02	24011472	Chip, 4700 ohm, 1/20W
RS04	24011102	Chip, 1k ohm, 1/20W
RS06	24011102	Chip, 1k ohm, 1/20W
RS07	24011103	Chip, 10k ohm, 1/20W
RS08	24011103	Chip, 10k ohm, 1/20W
RS09	24011102	Chip, 1k ohm, 1/20W
RS10	24011102	Chip, 1k ohm, 1/20W
RS12	24011103	Chip, 10k ohm, 1/20W
RS21	24011104	Chip, 100k ohm, 1/20W
RS22	24011104	Chip, 100k ohm, 1/20W
RS25	24011223	Chip, 22k ohm, 1/20W
RS26	24011223	Chip, 22k ohm, 1/20W
RS27	24011471	Chip, 470 ohm, 1/20W
RS28	24011471	Chip, 470 ohm, 1/20W
RS29	24011104	Chip, 100k ohm, 1/20W
RS30	24011104	Chip, 100k ohm, 1/20W
RS31	24011103	Chip, 10k ohm, 1/20W
RS32	24011104	Chip, 100k ohm, 1/20W
RS33	24011222	Chip, 2200 ohm, 1/20W
RS34	24011222	Chip, 2200 ohm, 1/20W
RS35	24011103	Chip, 10k ohm, 1/20W
RS36	24011103	Chip, 10k ohm, 1/20W
RS37	24011101	Chip, 100 ohm, 1/20W
RS40	24011101	Chip, 100 ohm, 1/20W
RS42	24011101	Chip, 100 ohm, 1/20W
RS48	24011101	Chip, 100 ohm, 1/20W
RS49	24011103	Chip, 10k ohm, 1/20W
RS51	24011103	Chip, 10k ohm, 1/20W
RS52	24011103	Chip, 10k ohm, 1/20W

Location No.	Part No.	Description
RS53	24011103	Chip, 10k ohm, 1/20W
RS54	24011103	Chip, 10k ohm, 1/20W
RS91	24011101	Chip, 100 ohm, 1/20W
RS92	24011101	Chip, 100 ohm, 1/20W
RS93	24011101	Chip, 100 ohm, 1/20W
RS94	24011101	Chip, 100 ohm, 1/20W
RV01	24011472	Chip, 4700 ohm, 1/20W
RV03	24011101	Chip, 100 ohm, 1/20W
RV04	24011101	Chip, 100 ohm, 1/20W
RV11	24011100	Chip, 10 ohm, 1/20W
RV12	24011100	Chip, 10 ohm, 1/20W
RV13	24011100	Chip, 10 ohm, 1/20W
RV15	24011222	Chip, 2200 ohm, 1/20W
RV24	24011750	Chip, 75 ohm, 1/20W
RV25	24011750	Chip, 75 ohm, 1/20W
RV26	24011750	Chip, 75 ohm, 1/20W
RV31	24011332	Chip, 3300 ohm, 1/20W
RV32	24011750	Chip, 75 ohm, 1/20W
RV63	24011102	Chip, 1k ohm, 1/20W
RV64	24011750	Chip, 75 ohm, 1/20W
RV65	24011750	Chip, 75 ohm, 1/20W
RV67	24011750	Chip, 75 ohm, 1/20W
RV70	24011472	Chip, 4700 ohm, 1/20W
RV74	24011750	Chip, 75 ohm, 1/20W
RV81	24011472	Chip, 4700 ohm, 1/20W
RV83	24011332	Chip, 3300 ohm, 1/20W
RV84	24011750	Chip, 75 ohm, 1/20W
RV85	24552101	OMF, 100 ohm, 1/2W
RV86	24011101	Chip, 100 ohm, 1/20W
RV87	24011182	Chip, 1800 ohm, 1/20W
RV89	24011680	Chip, 68 ohm, 1/20W
RV91	24011102	Chip, 1k ohm, 1/20W
RV92	24011103	Chip, 10k ohm, 1/20W
RV93	24011101	Chip, 100 ohm, 1/20W
RV94	24011472	Chip, 4700 ohm, 1/20W
RV95	24011273	Chip, 27k ohm, 1/20W
RV97	24011221	Chip, 220 ohm, 1/20W
RV117	24011750	Chip, 75 ohm, 1/20W
RV118	24011750	Chip, 75 ohm, 1/20W
RV119	24011750	Chip, 75 ohm, 1/20W
RV124	24011392	Chip, 3900 ohm, 1/20W
RV125	24011123	Chip, 12k ohm, 1/20W
RV126	24011274	Chip, 270k ohm, 1/20W
RV127	24011331	Chip, 330 ohm, 1/20W
RV128	24011472	Chip, 4700 ohm, 1/20W
RV140	24011103	Chip, 10k ohm, 1/20W
RV141	24011302	Chip, 3k ohm, 1/20W
RV142	24011103	Chip, 10k ohm, 1/20W
RV143	24011103	Chip, 10k ohm, 1/20W
RV144	24011472	Chip, 4700 ohm, 1/20W
RW40	24011182	Chip, 1800 ohm, 1/20W
RW45	24011103	Chip, 10k ohm, 1/20W
RY80	24366331	CF, 330 ohm
RY81	24011101	Chip, 100 ohm, 1/20W
RY82	24011182	Chip, 1800 ohm, 1/20W
S602	23145412	Switch, Slide
✻ U901	23788816	SIGNAL/CONV Board, PD0639Q
✻ UV02	23787468	DVI Board, PD0647A, 65HDX82
⚠ V901R	23071799	OTHER BLOCK, COUPLING R 50H13
⚠ V902G	23071800	OTHER BLOCK, COUPLING G 50H13
⚠ V903B	23071801	OTHER BLOCK, COUPLING B 50H13

Location No.	Part No.	Description
XV01	23153533	Ceramic Resonator, 8.00MHz, TCR1082AM
Y101	23565981	Owner's Manual, English/ French, 50H13

TOSHIBA

FILE NO. 020-200207
(REVISION 1)

SERVICE MANUAL

Color Television

N2PSP Chassis

50H82/65H82

(TAC0263) *(TAC0264)*

DOCUMENT CREATED IN JAPAN, May, 2003

TABLE OF CONTENTS

CHAPTER 1 **GENERAL ADJUSTMENTS**

SAFETY INSTRUCTIONS 3
CRT ASSEMBLY REPLACEMENT AND MOUNTING 4
PICTURE TUBE COMPONENTS ADJUSTMENT 6
REPLACEMENT OF THE CRT 9
SERVICE MODE 10
ELECTRICAL ADJUSTMENT 12
CONVERGENCE ADJUSTMENT 14
SCREEN AND MIRROR ALIGNMENTS 17
CIRCUIT CHECKS 18

CHAPTER 2 **SPECIFIC INFORMATIONS**

SETTING & ADJUSTING DATA 19
LOCATION OF CONTROLS 20
PROGRAMMING CHANNEL MEMORY 22
MECHANICAL DISASSEMBLY 23
CHASSIS REPLACEMENT PARTS LIST 27
PC BOARDS BOTTOM VIEW 47
TERMINAL VIEW OF TRANSISTORS 59
CIRCUIT BLOCK DIAGRAM 61
SPECIFICATIONS ..... END
APPENDIX:
CIRCUIT DIAGRAM

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.

   Refer to table-1 for high voltage (A), (B).
   (See SETTING & ADJUSTING DATA on page 19)

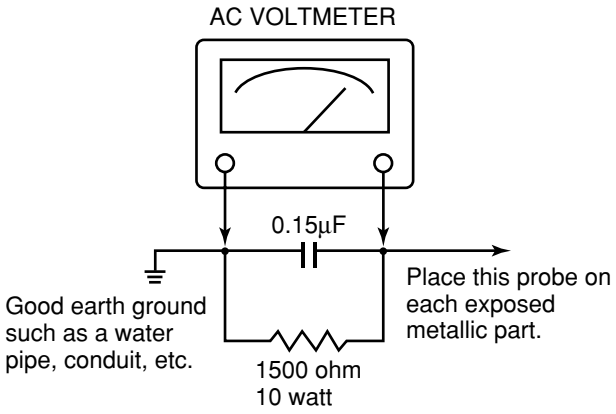
   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. This receiver is equipped with a Fail Safe (FS) circuit which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure in this manual.
3. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation Transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:

   Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 μF, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 μF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts rms. This corresponds to 0.2 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

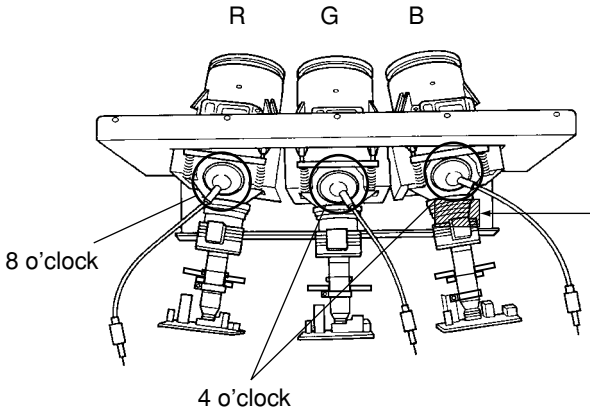

AC VOLTMETER
0.15μF
Good earth ground such as a water pipe, conduit, etc.
Place this probe on each exposed metallic part.
1500 ohm 10 watt

PRODUCT SAFETY NOTICE

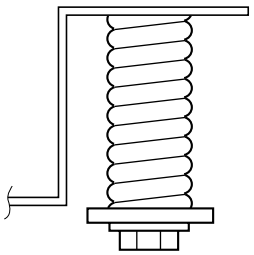
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

CRT ASSEMBLY REPLACEMENT AND MOUNTING

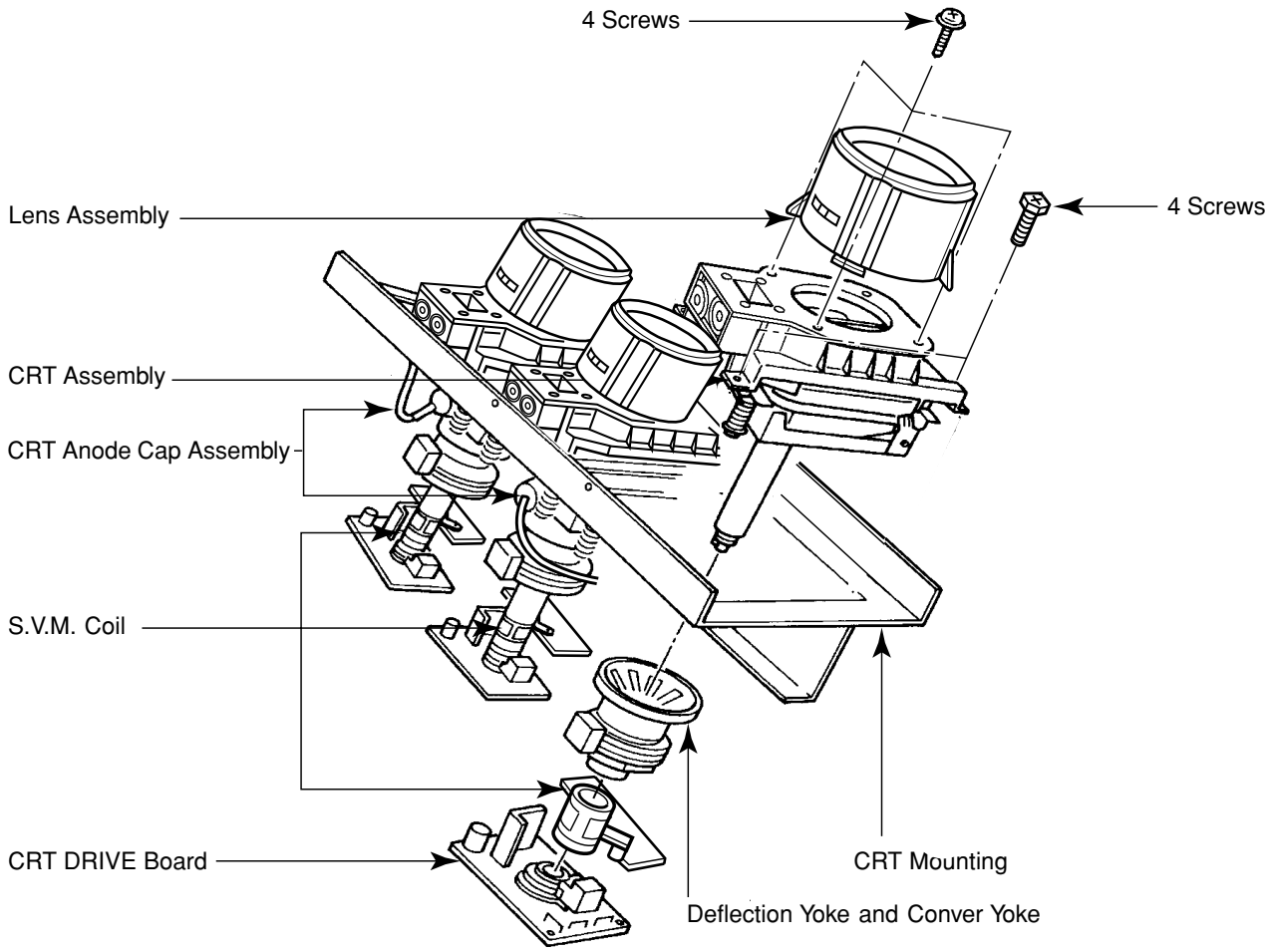
CAUTION : DO NOT LOOSEN THE HEX HEAD BOLTS WITH SPRINGS (12 PCS), BECAUSE THOSE ARE FOR SEALING OF CRT COOLANT.



Attention Serviceman



The Hex Head Bolts with Springs. (see sketch) used on CRT assembly, are "NOT" Adjustment Screws DO NOT LOOSEN-FLUID LEAKAGE WILL OCCUR.



Lens and Neck Components View

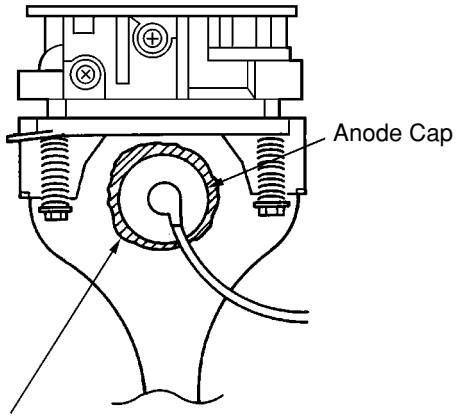
TO REMOVE CRT (Same procedure for R, G, B)

1. Remove CRT DRIVE Board, S. V. M. COIL and DEF. YOKE from CRT.
2. Remove Lens Assembly.
3. Detach CRT Anode Cap from CRT.
4. Remove CRT Assembly from CRT Mounting.

CRT REPLACEMENT (Same procedure for R, G, B)
Reverse the removal procedures except the followings.

1. Anode Cable should be replaced with new one. See “SERVICING PRECAUTIONS” shown below.
2. Install silicon (T461B) to the CRT, replace the Anode cable and put enough silicon again on around the Anode Cap as illustrated.

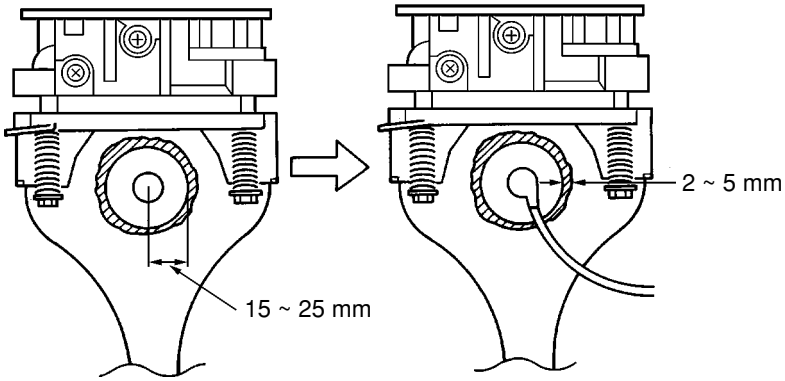
CAUTION: Align the Anode cable as illustrated on page 4.



ADJUSTING PROCEDURE IN REPLACING CRT

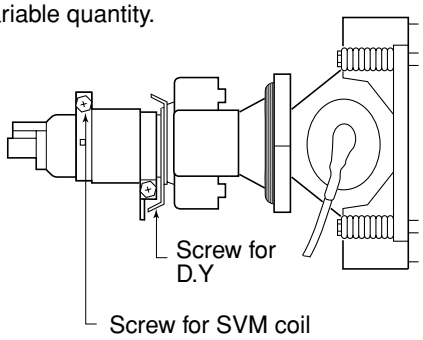
1. R.G.B. FOCUS ADJUSTMENT (page 7.)
2. PICTURE TILT ADJUSTMENT (page 7.)
3. USER CONVERGENCE CENTER CHECK (See owner's manual.)
4. CENTERING ADJUSTMENT (page 7.)
5. CONVERGENCE ADJUSTMENT (page 14.)
6. WHITE BALANCE ADJUSTMENT (page 13.)

Adjustments are complete.



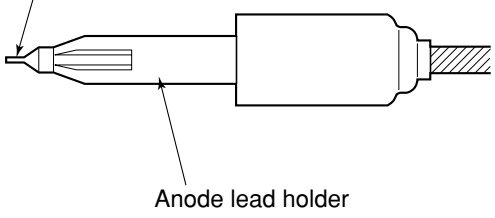
SERVICING PRECAUTIONS

■ Do not use a magnetized screw driver for screws of Deflection Yoke and Velocity Modulation Coil to avoid magnetization of electron gun. Magnetization of electron gun will degrade basic function and result in unbalance of right and left shift of user static convergence, and result in no variable quantity.



■ When replacing the anode cap assembly (CRT) or anode lead assembly (F.B.T.), remove the anode lead holder from old one and attach the holder again to new anode lead.

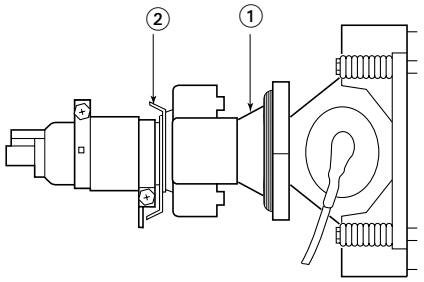
■ Check the point of anode lead in a straight line, if it is winding, please revise it.



WARNING : BEFORE SERVICING THIS CHASSIS, READ THE “X-RAY RADIATION PRECAUTION”, “SAFETY PRECAUTION” AND “PRODUCT SAFETY NOTICE” ON PAGE 3 OF THIS MANUAL.

PICTURE TUBE COMPONENTS ADJUSTMENT

DESCRIPTION OF NECK COMPONENTS



① Deflection yoke and convergence yoke
The position on the neck is required most front (CRT funnel side) and the screw is fastened after rotating yoke adjusting picture tilt.

② Centering magnet
After adjusting picture tilt, picture position is finally fixed by this magnet.
In order to get maximum margin of user convergence control for center of screen, this magnet have to be used for center convergence adjustment.

PREPARATION
Operate the receiver for at least 5 minutes.

R, G, B FOCUS ADJUSTMENT

1. Before adjusting the R, G, B FOCUS, remove the 4 screws of Lens Assembly which is fixed on the CRT Assembly. (See page 4.)
   Then turn around the Lens Assembly by 180˚ to adjust the fastening screw (Fig. a) and fasten the 4 screws to secure Lens Assembly.
2. Select the adjustment mode. (See page 10.)
3. Press “7” button to display the built-in cross-hatch.
4. Press “0” and “RTN” buttons to make the picture a single Red color.
   100 button ..... to erase Red color
   0 button ..... to erase Green color
   RTN button ..... to erase Blue color.
5. Loosen the fasten screw and adjust Red lens focus to best focusing point of picture center. Then fasten the screw. (See Fig. a.)

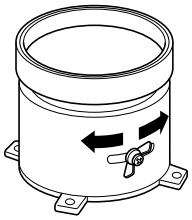


Fig. a

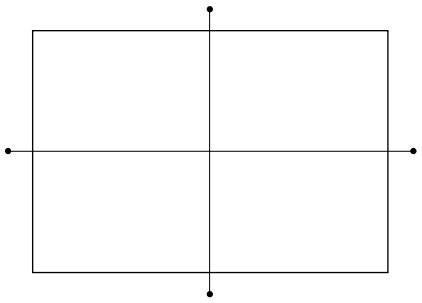
6. Adjust FOCUS VR “R” of FOCUS PACK to find best focusing point of picture center.
7. Repeat steps 3 to 5 for Green and Blue colors.

TILT ADJUSTMENT

Rotate R, G, B deflection yoke so that picture becomes horizon, then fasten screw.

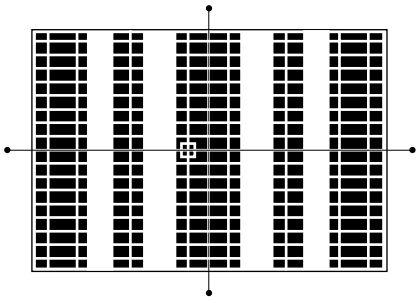
CENTERING ADJUSTMENT

1. Stretch a thread between two center of screen edge (top and bottom, left and right).



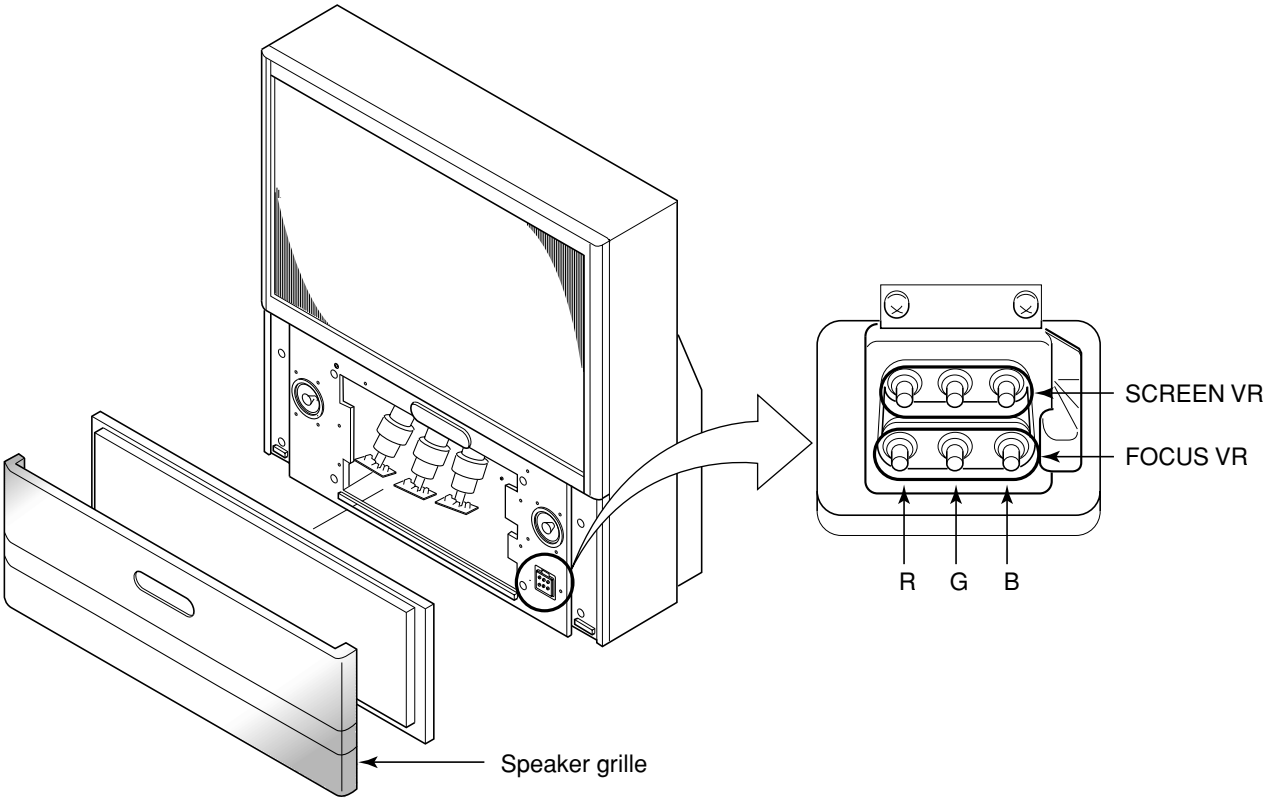
2. Receive NTSC.
   Then select SERVICE MODE. (See Page 10.)

3. Select CONVERGENCE ADJUSTING mode, and press "7" button to display the built-in cross-hatch pattern.
   Move Cursol and recognize horizontal line indicated Y:4. This line is vertical center. Push "9" button to display the vertical stripes, and recognaize horizontal center.



4. Perform VCEN adjustment. (See page 12.)
5. Adjust G centering magnet so that the cross-bar pattern center comes to screen center.
6. Perform HEIGHT adjustment . (See page 13.)
7. Perform VERT. LINEARITY adjustment.
8. Perform WIDTH adjustment. (See page 12.)
9. Check whole quality of green line.
10. Adjust R, B centering magnet so that the cross-bar pattern center comes to screen center.

LOCATION OF SCREEN AND FOCUS VR'S



REPLACEMENT OF THE CRT

Service parts are provided for each R, G and B.
The contents of the parts are as follows.

	R	G	B
HITACHI CRT	23008174	23008175	23008176

REPLACEMENT OF HIGH VOLTAGE CABLE

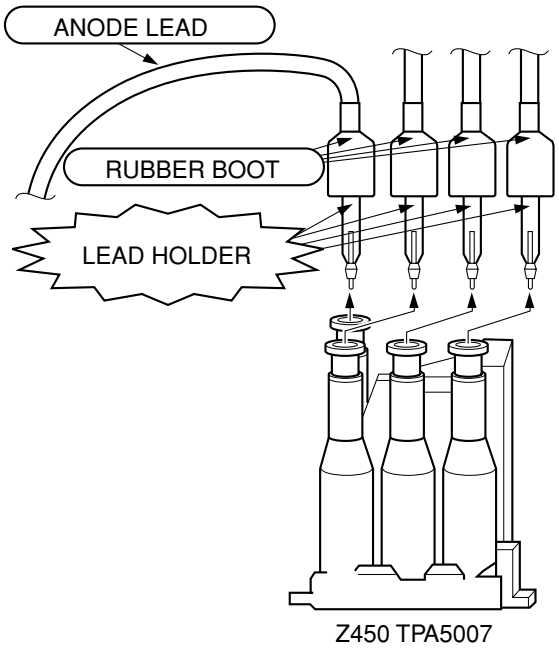


Fig. a

1. When replacing Anode Lead or Anode Cap with new one, remove Lead Holder from old lead as shown in figure below, and put it on new lead. Do not throw away Lead Holder.

NOTE : THE LEAD HOLDER IS ATTACHED TO TPA5007 (Z450), BUT IS NOT ATTACHED TO ANODE LEAD AND ANODE CAP. RUBBER BOOT IS ATTACHED TO ANODE LEAD AND ANODE CAP.

2. Detaching Lead Holder

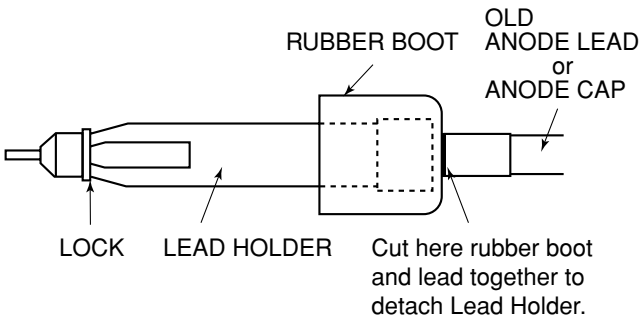


Fig. b

SERVICE MODE

1. ENTERING TO SERVICE MODE

1) Press MUTE button twice on Remote Control.

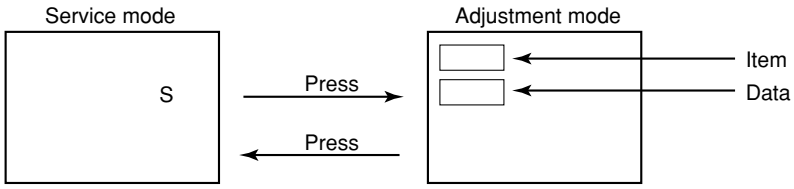
2) Press MUTE button again to keep pressing.

3) While pressing the MUTE button, press MENU button on TV set.

(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

Screen adjustment mode ON/OFF:	TV (ANT)/VIDEO button (on TV)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume ▲/▼ (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	RECALL+Channel button on TV (▲)
Initialization of the self diagnostic data:	RECALL+Channel button on TV (▼)

“RCUT” selection :	1 button
“GCUT” selection :	2 button
“BCUT” selection :	3 button
“SCNT” selection :	4 button
“SCOL” selection :	5 button
“TNTC” selection :	6 button
Convergence adj :	7 button
Self diagnostic display :	9 button

4. SELECTING THE ADJUSTING ITEMS

1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 19)

5. ADJUSTING THE DATA

1) Pressing of VOLUME ▲ or ▼ button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

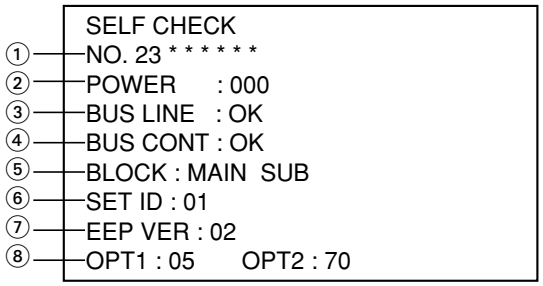
After replacing QA02, the following initialization is required.

1. Enter the service mode, then select any register item.
2. Press and hold the RECALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been complated.
3. Check the picture carefully. If necessary, adjust any adjustment item above. Perform “Programming Channel Memory” on the owner's manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

7. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode. The diagnosis will begin to check if interface among IC’s are executed properly.
2) During diagnosis, the following displays are shown.



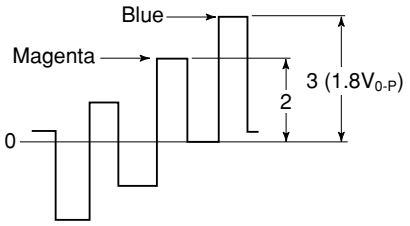
① Part number of microprocessor (QA01)
② Operation number of protection circuit (current limiter) . . . . “000” is normal.
③ BUS line check
- “OK” ..... Normal
- “SCL-GND” or “NG” ..... SCL-GND short circuit
- “SDA-GND” or “NG” ..... SDA-GND short circuit
- “SCL-SDA” or “NG” ..... SCL-SDA short circuit

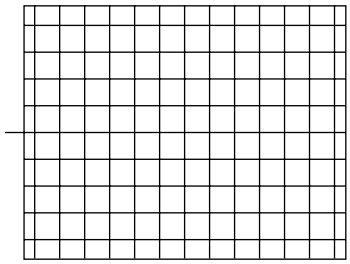
④ BUS line ACK (acknowledge) check
- “OK” ..... Normal
- Display of Location Number . . . . NG
- (Display example)
- “QA02 NG”, “H001 NG”, “Q501 NG” etc.
- Note: The indication of failure place is only one place though failure places are plural. When repair of a failure place finishes, the next failure place is indicated. (The order of priority of indication is left side.)

⑤ Sync. signal check
- Green display ..... Normal
- Red display ..... NG
  - MAIN ..... Main sync
  - SUB ..... Sub sync (when turn on the PIP)

⑥ ID code for TV Set
⑦ Version of "EEP"
⑧ Data for "OPT"

ELECTRICAL ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
fH (free-running frequency of Hor. oscillator)	1. Receive NTSC signal. 2. Short the terminal "TP +9V " and the terminal " TP (Free run) " on the signal board with a jumper wire. 3. Connect the probe of frequency counter to the lead of R426 and GND. 4. Adjust the frequency to "33.75±0.2 kHz" by turning R4034 on DPC Board. 5. Disconnect the shorted wire, then confirm that the picture is synchronized.
VERTICAL POSITION (VCEN)	1. Receive NTSC signal. 2. Connect he probe of digital voltmeter to TP-V and TP-G on SIGNAL Board. 3. Call up the adjustment mode display, then select the item VCEN. 4. Press the VOLUME ▲ or ▼ button to get the voltage 0±10 mV.
PICTURE POSITION (HPOS)	1. Receive NTSC signal. 2. Call up the adjustment mode display. 3. Select the item "HPOS", and adjust the data to "80H". 4. Adjust the picture position alternately by turning CENTERING MAGNETS for proper picture position. 5. Check the picture with off-air signal.
WIDTH (WID)	1. Receive NTSC signal. 2. Select the "FULL" mode by PIC SIZE button on Remote Control. 3. Call up the adjustment mode display, then select the item WID. 4. Press the VOLUME ▲ or ▼ button to get the picture so that left and right eddes of video signal begin to lack. 5. Press the VOLUME ▲ button to advance the data by 8 steps. NOTE: Check the horizontal picture position is correct.
SUB-BRIGHTNESS (BRTC)	1. Receive the air signal or aux Video signal. 2. Enter sports mode on user menu. 3. Enter the service mode, then select "**BRTC**" register. 4. Adjust the data to set dark area of picture to proper level.
SUB-COLOR (SCOL)	1. Receive color-bar signal from color-bar generator. 2. Adjust the BRIGHTNESS and CONTRAST to the center (RESET status). 3. Connect oscilloscope to TP501on the MAIN board. 4. Enter the service mode, then select "**SCOL**". 5. Adjust the data value to achieve 1.8$V_{0\text{-}p}$ of blue bar on scope. 6. Check the picture with off-air signal. 

ITEM	ADJUSTMENT PROCEDURE
HEIGHT (HIT)	1. Receive NTSC signal. 2. Select the "FULL" mode by PIC SIZE button on Remote Control. 3. Call up the adjustment mode display and select the item HIT. 4. Press the VOLUME ▲ or ▼ button to get the picture so that top and bottom of video signal begin to lack. 5. Press the VOLUME ▲ button to advance the data by 8 steps. Note: Check the vertical picture position is correct. Adjust the data of height after vertical linearty.
VERTICAL LINEARITY (VLIN) (FULL mode only)	1. Receive cross-hatch pattern. 2. Call up the adjustment mode display, then select the item **VLIN**. 3. Press the VOLUME ▲ or ▼ button to obtain the picture of the best linearity. 4. Then readjust the item HIT. 
WHITE BALANCE (RCUT) (GCUT) (BCUT) (RDRV) (BDRV)	1. Press RESET button on TV or remote hand set. 2. Call up the adjustment mode display, then adjust the data of items **RCUT**, **GCUT** and **BCUT** to “80”. 3. Press TV (ANT)/VIDEO button on TV. 4. Gradually rotate R, G and B SCREEN volume of FOCUS PAC (page 9) clockwise or counterclockwise until the raster appears slightly on the CRT through the each lens, and leave them. (Look into the lens in order to check the raster.) 5. Press TV (ANT)/VIDEO button on TV again. 6. Exit from service mode. 7. Receive white laster pattern signal, and adjust the contrast to the minimum to make white picture to low light. 8. Adjust the data of items **RCUT**, **GCUT** and **BCUT** for low light area. 9. Adjust the contrast to the maximum to make white picture to high light. 10. Adjust the data of items **RDRV** and **BDRV** Controls for proper white-balanced picture in high light area. 11. Check the white balance in both low and high light areas. If necessary, perform again steps from 7 to 9.

CONVERGENCE ADJUSTMENT

Adjust convergence from center to circumference in order.

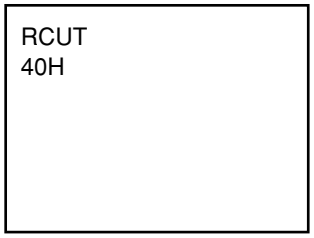
KEY FUNCTION IN THE CONVERGENCE ADJUSTMENT:

Lord BACK UP DATA:	1 button
Up :	2 button
Selet Green color:	3 button
Left :	4 button
Blinking of cursor ON/OFF:	5 button
Right:	6 button
Adjust mode ON/OFF:	7 button
Down:	8 button
Vertical stripe ON/OFF	9 button
Erase Green line:	0 button
Erase Red line:	100 button
Erase Blue line:	ENT button

Note:
Adjusting procedure in replacing convergence board.

1. User convergence center check. Make sure the best convergence setting is about the center of adjustable range.
2. CENTERING ADJUSTMENT
3. PICTURE POSITION ADJUSTMENT
4. HIT, WID ADJUSTMENT
5. CONVERGENCE ADJUSTMENT
6. Execute TOUCH FOCUS following instructions displayed on the screen after finishing CONVERGENCE ADJUSTMENT.
7. If TOUCH FOCUS ERROR is displayed after finishing TOUCH FOCUS, the method of CROSS-HATCH PATTERN after CONVERGENCE adjustment is different from what is exhibited on the right figure, or HARDWARE is out of order.

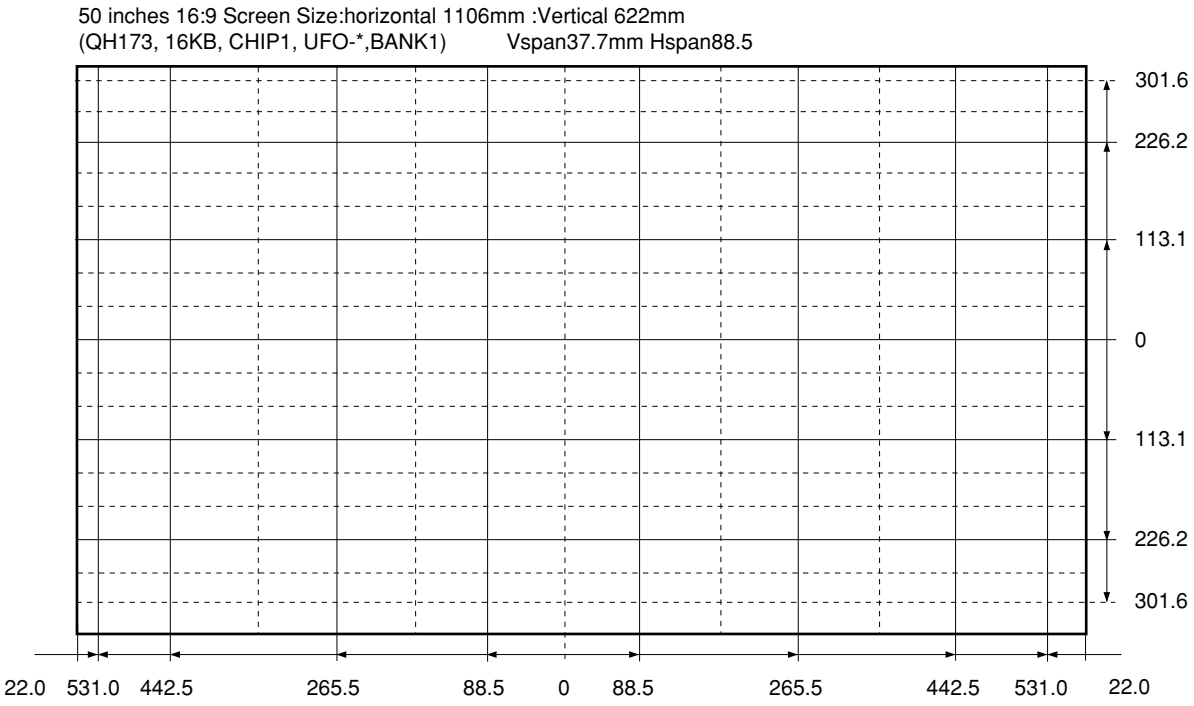
1. Select the adjustment mode following the steps on page 10.



2. Press “7” button to display the built-in cross-hatch pattern and press "9" button to display the vertical stripes.
3. If there is need to load BACKUP DATA, push "1" button, and then push "ENTER" button according to following message. Convergence become adjusted state at factory by this action.
   If there is no need, pass this process.
   Never to use this function to new convergence board, because BACKUP DATA is not exist.
4. Adjustment around cursor can be done.
   The pattern includes three colors (R, G, B).
   The cursor should be blinking in Red.
   This means that the Red color is adjustable.
5. Press “3” button to select Green color to be adjusted.
6. Press “5” button to stop the blinking of cursor.
7. Press “2 (up)”, “8 (down)”, “4 (left)” or “6 (right)” to obtain the correct cross-hatch pattern as above.
   If necessary, the specified color line can be erased from the screen.
   100 button ..... to erase Red line
   0 button ..... to erase Green line
   CH RTN button ..... to erase Blue line
8. Press “5” button to make the cursor blinking.
9. Press “2”, “8”, “4”, “6” buttons to move the cursor to other point to be adjusted.
10. Repeat steps 6 to 9.
11. Repeat steps 5 to 10 to adjust Red and Blue colors.
    Converge the selected color line into the Green line.
12. Press “7” button to memorize the adjusted states.
    At this time, picture changes for about 1 second.
13. Press the TOUCH FOCUS button when "PLEASE PUSH TOUCH FOCUS" is displayed on the screen.
14. TOUCH FOCUS CALIBRATION MODE is executed.
15. It returns to the normal screen after displaying "CALIBRATION FINISHED".

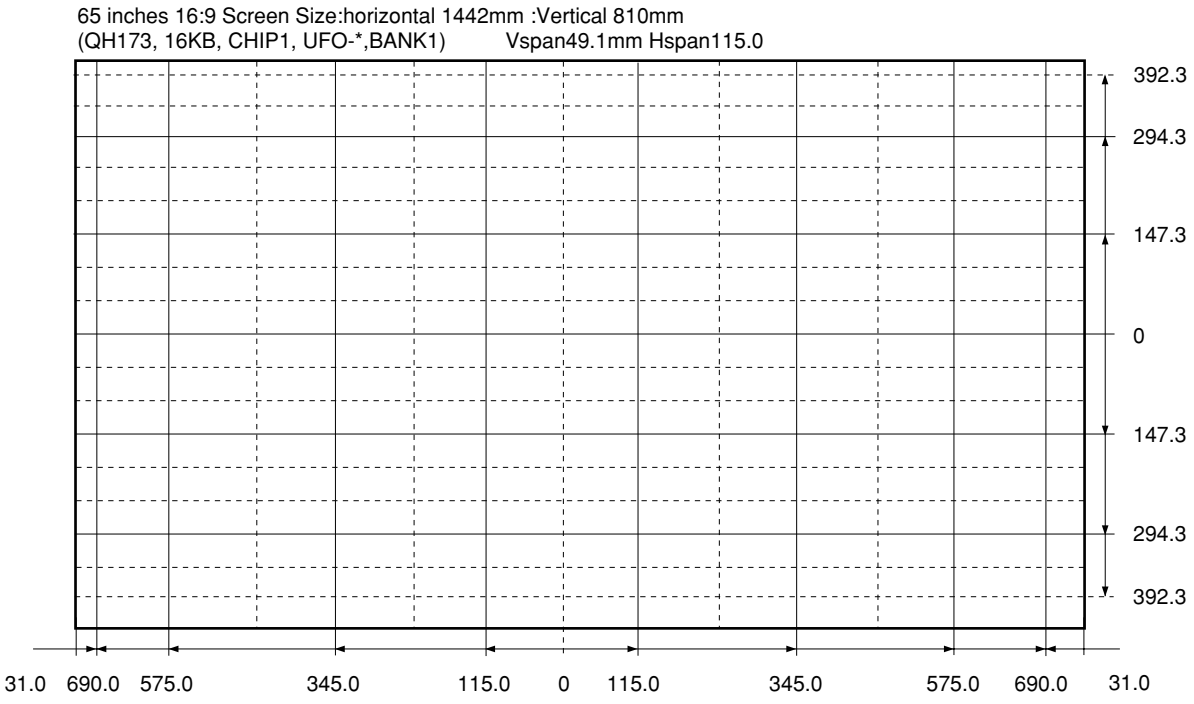
Adjusting Dimension of Each Picture Screen
(16:9 screen size:) 50 inches

(1) HD (1080I/NTSC)



Adjusting Dimension of Each Picture Screen
(16:9 screen size:) 65 inches

(1) HD (1080I/NTSC)



NOTES

In many cases, color misconvergence may be corrected by returning HIT and WID data in main deflection side to initial adjusting values. Following cases will surely require readjustment of convergence.

CRT REPLACEMENT

When CRT is replaced, main deflection readjustment and color matching are required.
Perform following procedures.

1. Replace two CRT's of blue and red.
2. Perform horizontal adjustment for blue and red yokes on base of green CRT data. Mount yoke and velocity mod. coil alignment, pushing towards CRT without gap.
3. Adjust alignment of blue and red. (Refer Alignment adjustment for details.)
4. Rotating centering magnet, adjust CRT centers of red and blue to CRT center of green.
   (Picture position adjustment)
5. Adjust HIT and WID data of main deflection, and decide data at the most precise screen comparing to green data.
6. Adjust convergence of screen picture for color matching. Do not move green one at this time.
7. After convergence adjustment of screen picture finishes, replace green CRT.
   For green CRT as well, repeat steps 2 to 5 above on bases of red and blue color matching to adjust convergence.
8. Execute TOUCH FOCUS following instructions displayed on the screen after finishing convergence adjustments of all the colors.
   Note: Press button "7" again after "PLEASE PUSH TOUCH FOCUS" has been displayed. Then, TOUCH FOCUS will not be executed, and the current state of convergence will be displayed.

REPLACING CONVERGENCE UNIT

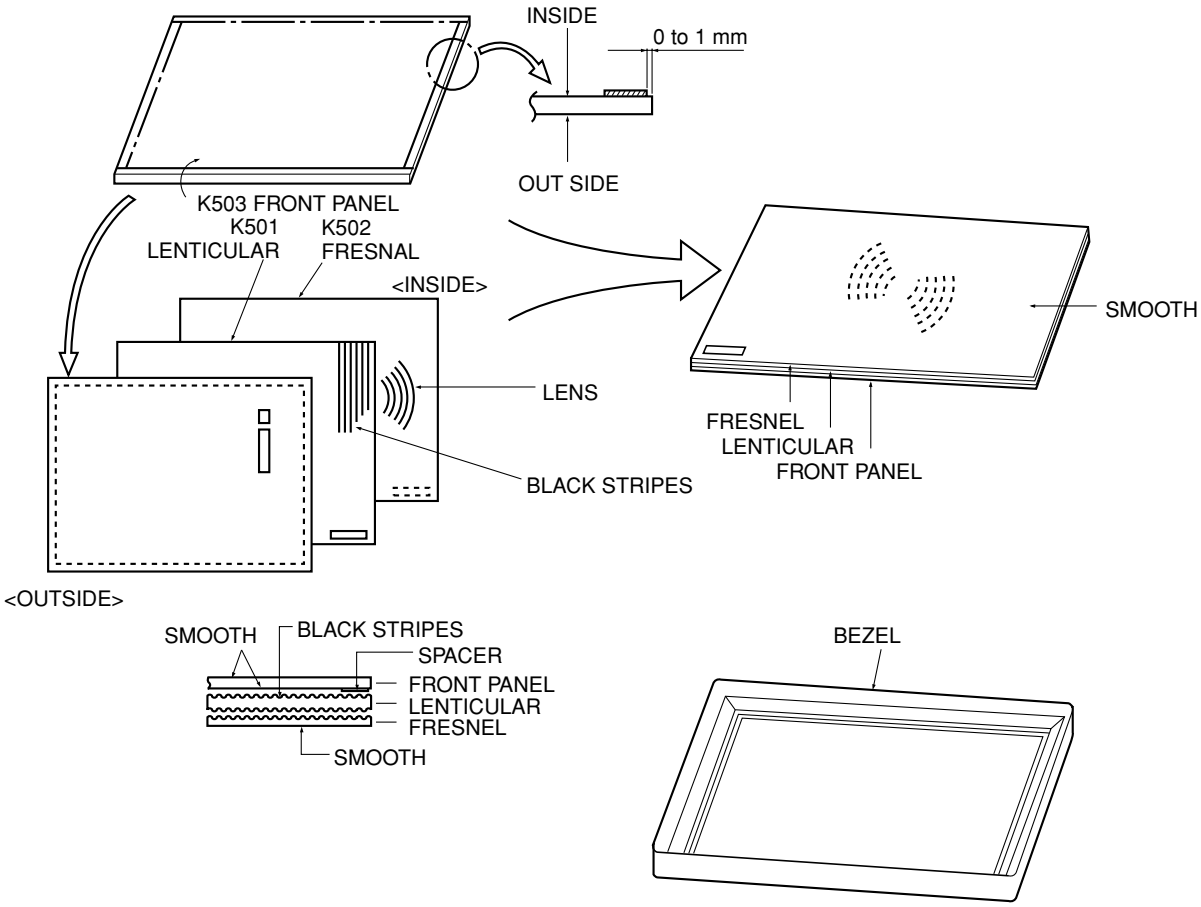
When replacing convergence unit, picture screen require readjustment basically, but the following method allows process be reduced considerably.

1. Replace the memory (Q713) on defective unit with memory on new unit. Mounting the unit on the SET after the above working realizes picture screen before replacement immediately.
2. Mount unit which has old memories, on SET and turn it on. Screen shows whole picture looks like straightly shifted towards vertical or horizontal direction.
3. Adjust again centers of green, red and blue with centering magnets.
4. Check picture screen for slight disparity of color and picture size. If necessary, add some adjustments of main deflection and color matching of convergence.
5. Execute TOUCH FOCUS following instructions displayed on the screen after finishing convergence adjustments of all the colors.
   Note: Press button "7" again after "PLEASE PUSH TOUCH FOCUS" has been displayed. Then, TOUCH FOCUS will not be executed, and the current state of convergence will be displayed.

SCREEN AND MIRROR ALIGNMENTS

ASSEMBLING OF FRONT SCREEN

MOUNTING OF FRONT SCREEN



CAUTION : Do not hold the optical system parts (lens and mirror) with bare hand to avoid finger-prints on the surface of those parts.

HOW TO CLEAN LENS AND MIRROR

1. Be sure to remove sand dust with an air brush, etc.
2. When it is stained slightly, breathe upon it and wipe away with the specified cleaning cloth.
   For other stains than the above, wipe the stains away with the specified cloth into which a cleaning liquid has been soaked.

Cleaning liquid..... **LENS LUSTER** (Manufactured by Edmund Scientific Co.), etc.

HOW TO CLEAN SCREEN

When cleaning the screen, use a soft cloth so as not to damage the screen.

1. Wipe the screen with a dry cloth to remove moisture on the screen.

Note : Absolutely do not use detergent, water, alcohol, benzine, thinner, etc. for cleaning in order not to wipe away the black print on the surface.

CIRCUIT CHECKS

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST to minimum (zero beam current).
3. High voltage must be measured below (B) kV.
   Refer to table-1 for high voltage (B).
   (See SETTING & ADJUSTING DATA on page 19)
4. Vary the BRIGHTNESS to both extremes to be sure the high voltage does not exceed the limit under any conditions.

CAUTION:
When the following parts fail, check the High Voltage after replacing.

Location No.	Name	Descriptions 50", 65"
T461	Flyback	TFB3092AD
C407	Capacitor	4700pF, ±3%
C408	Capacitor	8200pF, ±5%
C441	Capacitor	4700pF, ±3%
C432	Capacitor	8200pF, ±5%
C433	Capacitor	1200pF, ±3%

ANODE VOLTAGE MEASURING METHOD

CAUTION: Take extra precaution when measuring this high voltage. High voltages are also present in surrounding circuit boards (CRT DRIVE assembly, DEFLECTION assembly, and POWER SUPPLY assembly).

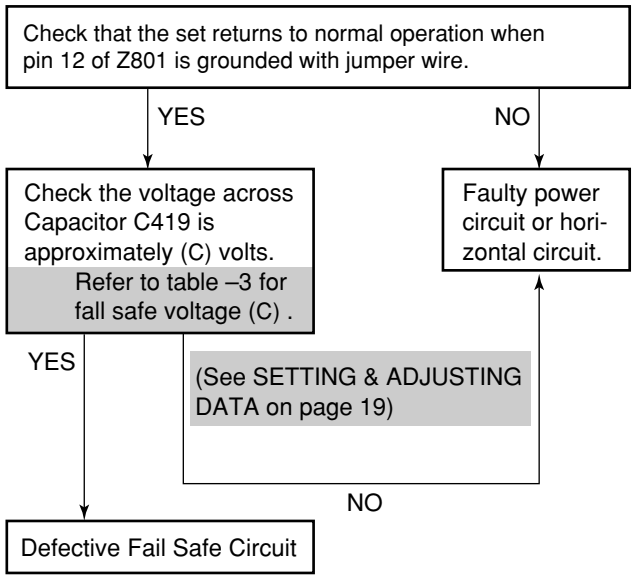
1. Disconnect the FBT anode cable as outlined below. Measure high voltage at the point where the cable enters the FBT.
2. Holding the rubber cover firmly, turn it counterclockwise and check that the lock has been disengaged. (See Fig. b on page 9.)
3. Determine the extent of the rubber cover before disconnecting the cable.
4. Pull straight up the anode cable to disconnect.
5. When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

FS CIRCUIT CHECK

The Fail Safe (FS) circuit check is indispensable for the final check in servicing. Checking should be done following the steps below.

1. Turn the receiver on.
2. Temporarily short TP- (R) and TP- (X) on the DEF/POWER Board with a jumper wire.
   Raster and sound will disappear.
3. The receiver must remain in this state even after removing the jumper wire. This is the evidence that the FS circuit is functioning properly.
4. To obtain a picture again, temporarily turn the receiver off and allow the FS circuit more than 5 seconds to reset. Then turn the receiver on to produce a normal picture.

Troubleshooting Guide for Fail Safe Circuit


Check that the set returns to normal operation when pin 12 of Z801 is grounded with jumper wire.
YES
NO
Check the voltage across Capacitor C419 is approximately (C) volts.
Refer to table –3 for fall safe voltage (C) .
(See SETTING & ADJUSTING DATA on page 19)
Faulty power circuit or horizontal circuit.
YES
NO
Defective Fail Safe Circuit

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA

【SAFETY INSTRUCTIONS】

		50", 65"
HIGH VOLTAGE AT ZERO BEAM:	(A)	31.0 kV
MAX HIGH VOLTAGE:	(B)	32.5 kV

Table-1

【SERVICE MODE】

ADJUSTING ITEMS AND DATA IN THE SERVICE MODE:

Item	Name of adjustment	Preset	Data
RCUT	R CUTOFF	80H	←
GCUT	G CUTOFF	80H	←
BCUT	B CUTOFF	80H	←
RDRV	R DRIVE	40H	←
BDRV	B DRIVE	40H	←
BRTC	SUB-BRIGHT	80H	←
TNTC	SUB-TINT	48H	←
SCOL	SUB COLOR	0BH	←
SCNT	SUB-CONTRAST	15H	←
HPOS	HORIZ. POSITION	80H	←
VPOS	VERT. POSITION	01H	←
HIT	HEIGHT	31H	55H
LIN	V-LINEARITY	14H	←
VSC	V-S CORRECTION	10H	←
WID	PICTURE WIDTH	1FH	←

Item	Name of adjustment	Preset	Data
VPS	V-SHIFT	0AH	←
COLC	SUB COLOR CEN NTSC	52H	←
VCP	V-COMPENSATE	0AH	←
PARA	E-W PARABOLA (DPC)	17H	←
CNR	E-W CORNER	08H	←
HCP	H-COMPENSATE	00H	←
VFC	V-F CORRECT	00H	←
PHUE	PIP TINT	40H	←
PCNT	PIP CONT	18H	←
PCOL	PIP COLOR	1AH	←
VCEN	V POSITION	76H	←
TVOP	TV OPTION	58H	←
OPT1	TV SET OPTION	50H	←
OPT2	TV SET OPTION	8DH	←

Table-2

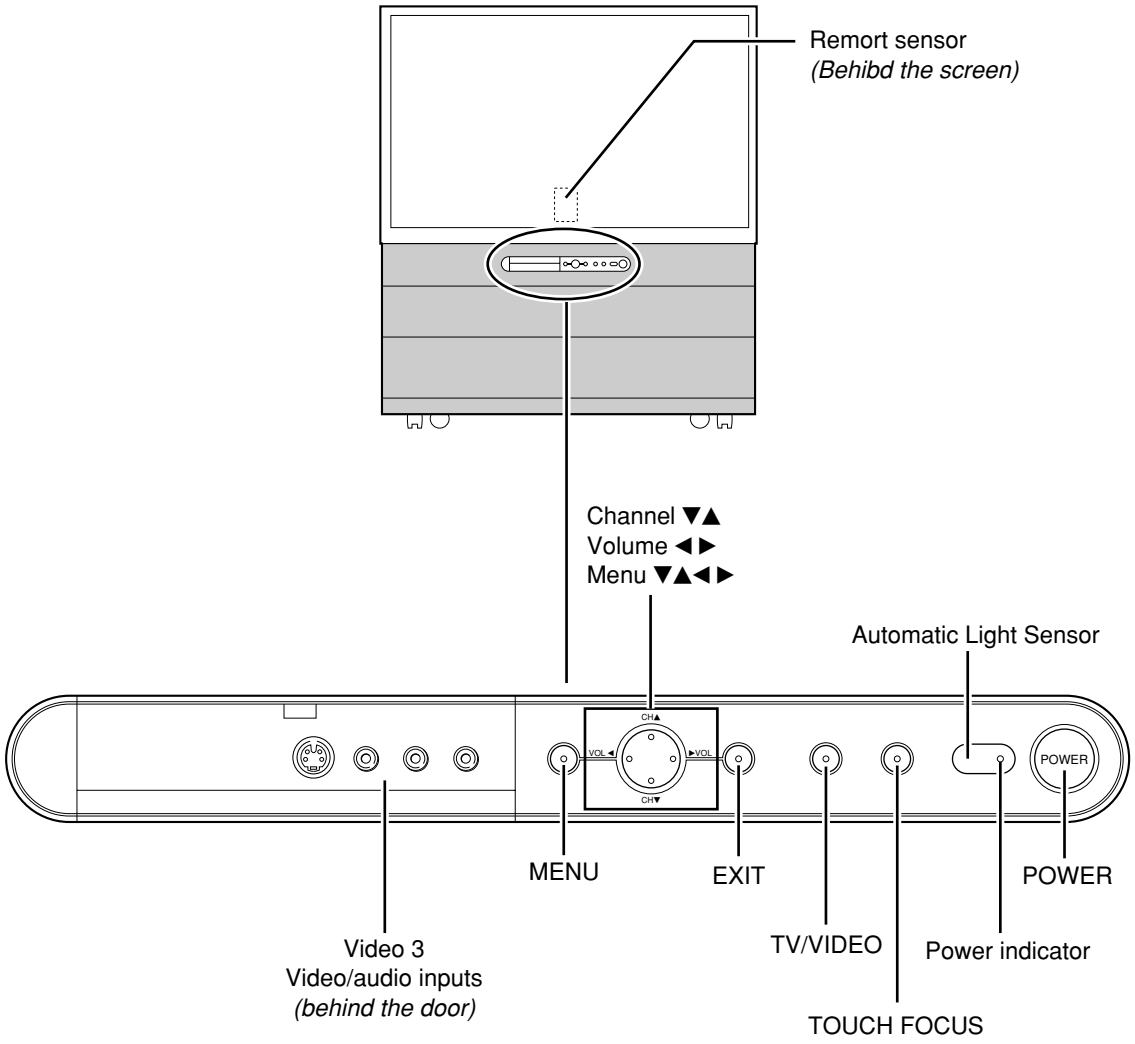
【CIRCUIT CHECKS】

HIGH VOLTAGE DET	(C)	8.7 V

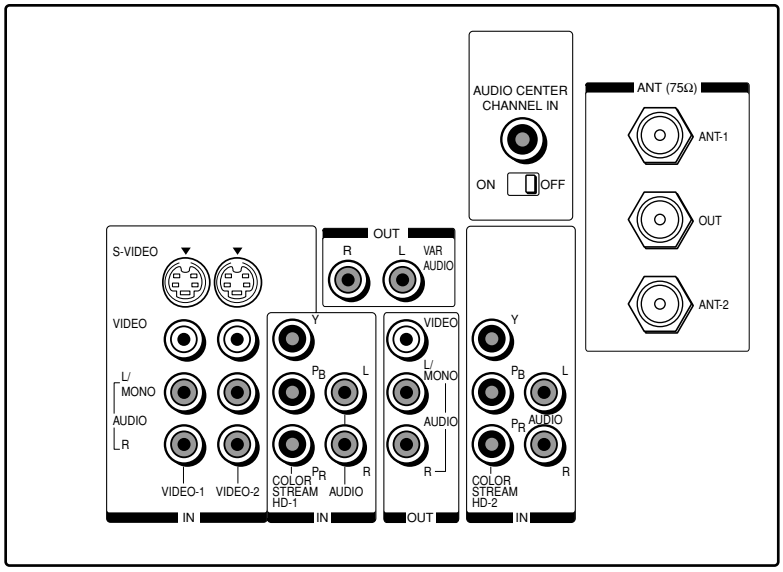
Table-3

LOCATION OF CONTROLS (Representative: 50H82)

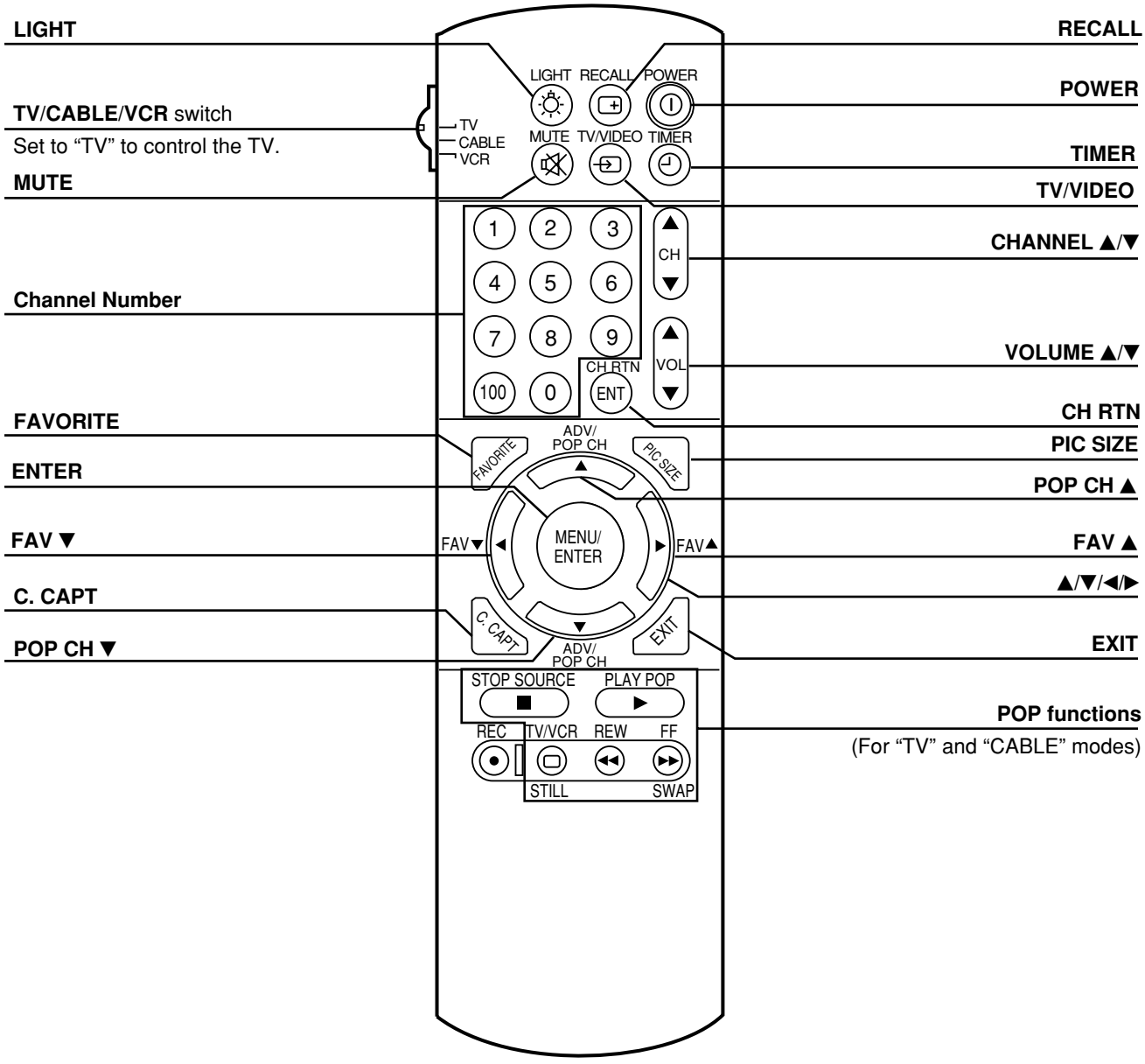
TV front



TV rear



Remote Control



PROGRAMMING CHANNEL MEMORY

The channel memory is the list of TV channel numbers the TV tunes in when you press the CHANNEL ▲ or ▼ button.
First, use the TV/CABLE and CH PROGRAM functions to preset all active channels in your area automatically.
If necessary, arrange the preset channels with the ADD/ERASE functions so that you can tune into only desired channels.
Note: If you utilize both ANT-1 and ANT-2 terminals for some model, perform programming channels for each input source.

TV/CABLE function

1. Press **MENU**, then press ► or ◄ until the SET UP menu appears.
2. Press ▼ (or ▲) until "TV/CABLE" is highlighted.
3. Press ► or ◄ to highlight either "TV" or "CABLE", whichever you use.

CH PROGRAM function

1. Select "CH PROGRAM" following steps 1 and 2 above.
2. Press ► or ◄ to start channel programming.
   The TV will automatically cycle through all the TV or CABLE channels selected by the TV/CABLE function, and store active channels in the channel memory.
3. When channel programming is complete, you will see the message to the right appears.
4. Press **CHANNEL** ▲ or ▼ to make sure the channel programming has been done properly.

ADD/ERASE function

After performing the CH PROGRAM function, you can add or erase specific channels.

1. Select the channel you want to erase using the **CHANNEL** ▲ or ▼ button, or select the channel you want to add using the **Channel Number** buttons.
2. Press **MENU**, then press ► or ◄ until the SET UP menu appears.
3. Press ▼ (or ▲) until "ADD/ERASE" is highlighted.
4. Press ► or ◄ :
   To erase the channel press the button until "ERASE" is highlighted.

   To add the channel press the button until "ADD" is highlighted.
5. Repeat steps 1 to 4 for other channels.

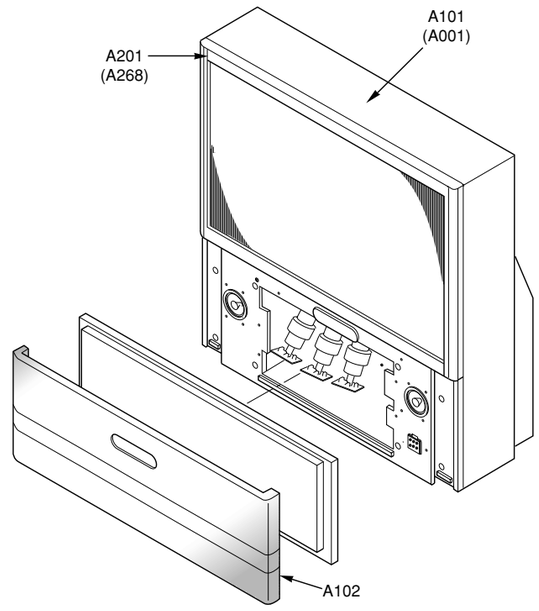
You have now completed the channel programming.

Note: The CHANNEL ▼/▲ buttons on the TV function as the ▼/▲ buttons while a menu is on the screen.

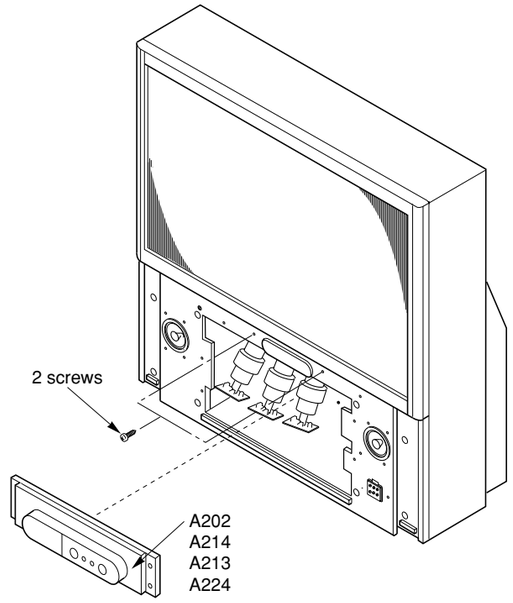
* Please refer to owner's manual in detail.

MECHANICAL DISASSEMBLY

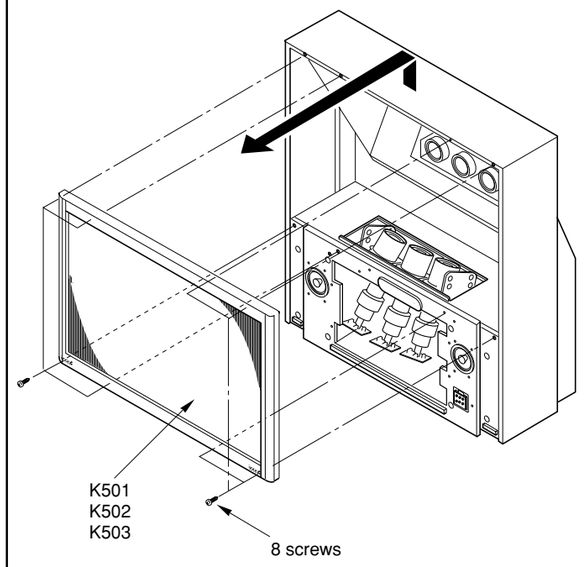
1 Speaker Grille Removal



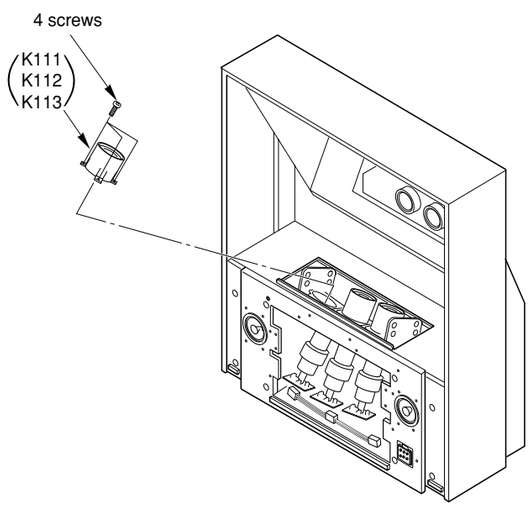
2 Control Panel Removal



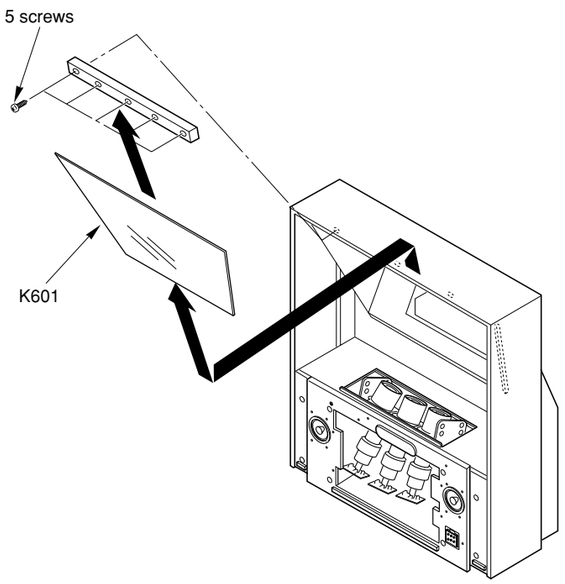
3 Front Mask Removal



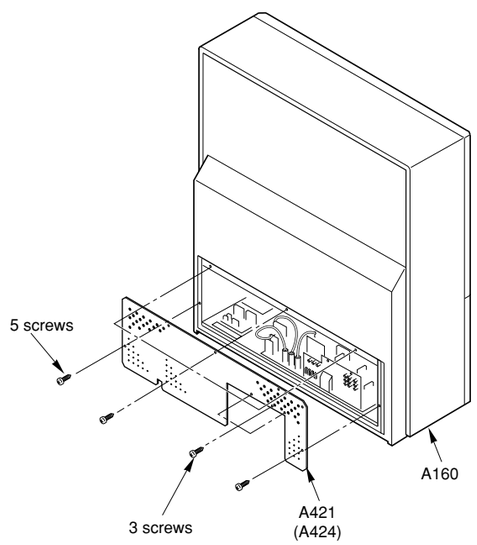
4 Shield Plate, Lens Removal



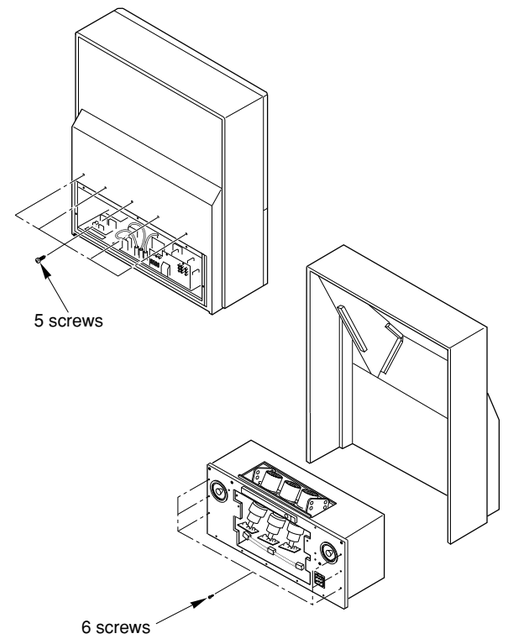
5 Mirror Removal



6 Back Board Removal



7 Light Box Removal



CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:
- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with * mark is no longer available after the end of the production.*

Models : 50H82/65H82

Capacitors	CD	:	Ceramic Disk	PF	:	Plastic Film	EL	: Electrolytic
Resistors	CF	:	Carbon Film	CC	:	Carbon Composition	MF	: Metal Film
	OMF	:	Oxide Metal Film	VR	:	Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
CAPACITORS		
C102	24665221	ELECTROLYTIC, 10V 220UF M 3A
C105	24100102	CERAMIC CHIP, 50V F 1000PF Z
C106	24669479	ELECTROLYTIC, 50V 4.7UF M 3A
C107	24666221	ELECTROLYTIC, 16V 220UF M 3A
C112	24665221	ELECTROLYTIC, 10V 220UF M 3A
C115	24100102	CERAMIC CHIP, 50V F 1000PF Z
C117	24666221	ELECTROLYTIC, 16V 220UF M 3A
C205	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
C207	24105100	CERAMIC CHIP, 50V CH 10PF D
C208	24105100	CERAMIC CHIP, 50V CH 10PF D
C209	24105100	CERAMIC CHIP, 50V CH 10PF D
C212	24666100	ELECTROLYTIC, 10V 10UF M 3A
C220	24503041	PLASTIC FILM , 63V 0.1UF J
C221	24503041	PLASTIC FILM , 63V 0.1UF J
C301	24617820	ELECTROLYTIC, 50V 100UF M 11L 3D
C302	24669101	ELECTROLYTIC, 50V 100UF M 3A
C303	24109473	CERAMIC CHIP, 25V B 0.047UF K
C304	24503053	PLASTIC FILM, 63V 1UF J
C305	24082057	PLASTIC FILM, 100V 220000PF J
C306	24082260	PLASTIC FILM, 100V 4700PF J
C307	24109333	CERAMIC CHIP CK73B 25V 33000PFK
C308	24617820	ELECTROLYTIC, 50V 100UF M 11L 3D
C309	24693473	PLASTIC FILM, 100V 0.047UF J
C311	24109471	CERAMIC CHIP, 50V B 470PF K
C312	24666100	ELECTROLYTIC, 10V 10UF M 3A
C313	24666220	ELECTROLYTIC, 16V 22UF M 3A
C321	24503041	PLASTIC FILM , 63V 0.1UF J
C322	24503045	PLASTIC FILM, 63V 0.22UF J
C323	24503045	PLASTIC FILM, 63V 0.22UF J
C324	24073053	ELECTROLYTIC, 25V 100UF M 3A
C325	24503041	PLASTIC FILM , 63V 0.1UF J
C326	24503041	PLASTIC FILM , 63V 0.1UF J
C327	24567103	PLASTIC FILM, 50V 0.01UF J
C328	24617912	ELECTROLYTIC, 50V 2.2UF K 3A LI
C329	24567183	PLASTIC FILM, 50V 18000PF J
C331	24212102	CERAMIC DISC, 50V B 1000PF K
C332	24073020	ELECTROLYTIC, 10V 1000UF M 3A
C333	24567103	PLASTIC FILM, 50V 0.01UF J

Location No.	Parts No.	Description
C334	24591102	PLASTIC FILM, 50V 1000PF J
C335	24503049	PLASTIC FILM, 63V 0.47UF J
C336	24503041	PLASTIC FILM , 63V 0.1UF J
C337	24212101	CERAMIC DISC, 50V B 100PF K
C338	24073020	ELECTROLYTIC, 10V 1000UF M 3A
C339	24666101	ELECTROLYTIC, 16V 100UF M 3A
C341	24591222	PLASTIC FILM, 50V 2200PF J
C342	24591222	PLASTIC FILM, 50V 2200PF J
C343	24667101	ELECTROLYTIC, 25V 100UF M 3A
C344	24567393	PLASTIC FILM, 50V 39000PF J
C345	24503041	PLASTIC FILM , 63V 0.1UF J
C346	24669100	ELECTROLYTIC, 50V 10UF M 3A
C347	24085946	ELECTROLYTIC, NONPOLAR, 16V 10UF M 3A
C348	24503045	PLASTIC FILM, 63V 0.22UF J
C349	24503045	PLASTIC FILM, 63V 0.22UF J
C351	24503041	PLASTIC FILM , 63V 0.1UF J
C352	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C353	24669010	ELECTROLYTIC, 50V 1.0UF M 3A
C354	24567823	PLASTIC FILM, 50V 82000PF J
C355	24567563	PLASTIC FILM, 50V 56000PF J
C356	24665220	ELECTROLYTIC CE04Q 10V 22UF M 3A
C357	24073037	ELECTROLYTIC, 16V 47UF M 3A
C401	24214332	CERAMIC DISC, 500V B 3300PF K
C402	24214391	CERAMIC DISC, 500V B 390PF K
C403	24676220	ELECTROLYTIC, 100V 22UF M 3A
C405	24567124	PLASTIC FILM, 50V 0.12UF J
⚠ C407	24503099	MT PLA CAP T 1800VH 472H
⚠ C408	24820822	PLASTIC FILM, 630V 8200PF J
C410	24503149	PLASTIC FILM, 250V 3.3UF
C411	24678220	ELECTROLYTIC, 200V 22UF M
C412	24828823	PLASTIC FILM, 200V 0.082UF J
C413	24214221	CERAMIC DISC, 500V B 220PF K
⚠ C414	24503142	MT PLA CAP T 400V 274J
C415	24092484	CERAMIC DISC, 2KV B 1500PF K
C416	24503334	MT PLA CAP T 250V 155J
⚠ C417	24503252	MT PLA CAP T 400V 304J
C418	24679330	ELECTROLYTIC, 250V 33UF M 3A
C420	24503041	PLASTIC FILM , 63V 0.1UF J
C421	24073118	ELECTROLYTIC, 160V 33UF M

Location No.	Parts No.	Description
C422	24591102	PLASTIC FILM, 50V 1000PF J
C423	24211222	CERAMIC DISC, 2KV B 2200PFK
C424	24828473	PLASTIC FILM, 200V 47000PF J
C426	24591153	PLASTIC FILM, 50V 0.015MF J
C427	24567123	PLASTIC FILM, 50V 12000PF J
C428	24591102	PLASTIC FILM, 50V 1000PF J
C429	24567333	PLASTIC FILM, 50V 33000PF J
C431	24591102	PLASTIC FILM, 50V 1000PF J
⚠ C432	24820822	PLASTIC FILM, 630V 8200PF J
⚠ C433	24503061	MT PLA CAP T 1800VH 122H
C434	24073057	ELECTROLYTIC, 25V 1000UF M 3A
C435	24503041	PLASTIC FILM , 63V 0.1UF J
C436	24503041	PLASTIC FILM , 63V 0.1UF J
C437	24666331	ELECTROLYTIC, 16V 330UF M 3A
C438	24666101	ELECTROLYTIC, 16V 100UF M 3A
C439	24591223	PLASTIC FILM, 50V 0.022MF J
⚠ C441	24503099	MT PLA CAP T 1800VH 472H
C451	24567223	PLASTIC FILM, 50V 22000PF J
C452	24073038	ELECTROLYTIC, 16V 100UF M 3A
C453	24109223	CERAMIC CHIP, 25V B 0.022UF K
C454	24797010	ELECTROLYTIC, 50V 1UF M
C455	24109103	CERAMIC CHIP, 50V B 0.01UF K
C456	24085903	ELEC. NONPOLAR, 50V 1.0UF M NP 3A
C457	24669010	ELECTROLYTIC, 50V 1.0UF M 3A
C458	24073038	ELECTROLYTIC, 16V 100UF M 3A
C459	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C462	24105101	CERAMIC CHIP, 50V CH 100PF J
C463	24109103	CERAMIC CHIP, 50V B 0.01UF K
C464	24109103	CERAMIC CHIP, 50V B 0.01UF K
C465	24109103	CERAMIC CHIP, 50V B 0.01UF K
C467	24085903	ELEC. NONPOLAR, 50V 1.0UF M NP 3A
C471	24503041	PLASTIC FILM , 63V 0.1UF J
C472	24436100	CERAMIC DISC, 50V SL 10PF C
C473	24503041	PLASTIC FILM , 63V 0.1UF J
C474	24501561	PLASTIC FILM, 50V 560PF J
C475	24501272	PLASTIC FILM, 50V 27OO PF J
C476	24669479	ELECTROLYTIC, 50V 4.7UF M 3A
C477	24567103	PLASTIC FILM, 50V 0.01UF J
C478	24591822	PLASTIC FILM, 50V 8200PF J
C479	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C481	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C482	24501272	PLASTIC FILM, 50V 27OO PF J
C483	24501102	PLASTIC FILM, 50V 1000PF J
C484	24503041	PLASTIC FILM , 63V 0.1UF J
C485	24666331	ELECTROLYTIC, 16V 330UF M 3A
C486	24567103	PLASTIC FILM, 50V 0.01UF J
C487	24501151	50V 151J
C488	24503041	PLASTIC FILM , 63V 0.1UF J
C489	24666331	ELECTROLYTIC, 16V 330UF M 3A
C491	24591332	PLASTIC FILM, 50V 3300PF J
C493	24436220	CERAMIC DISC, 50V SL 22PF J
C496	24503049	PLASTIC FILM, 63V 0.47UF J
C497	24073039	ELECTROLYTIC CE04P 16V 220UF M 3A
C498	24073084	ELECTROLYTIC, 50V 4.7UF M 3A
C499	24073035	ELECTROLYTIC CE04P 16V 22UF M 3A
C510	24666101	ELECTROLYTIC, 16V 100UF M 3A
C511	24109103	CERAMIC CHIP, 50V B 0.01UF K
C513	24109103	CERAMIC CHIP, 50V B 0.01UF K
C515	24666221	ELECTROLYTIC, 16V 220UF M 3A
C518	24666100	ELECTROLYTIC, 10V 10UF M 3A
C529	24109103	CERAMIC CHIP, 50V B 0.01UF K
C530	24669010	ELECTROLYTIC, 50V 1.0UF M 3A
C531	24666101	ELECTROLYTIC, 16V 100UF M 3A
C532	24666100	ELECTROLYTIC, 10V 10UF M 3A
C536	24109103	CERAMIC CHIP, 50V B 0.01UF K

Location No.	Parts No.	Description
C537	24109103	CERAMIC CHIP, 50V B 0.01UF K
C547	24109103	CERAMIC CHIP, 50V B 0.01UF K
C551	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C552	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C553	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C554	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C555	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C556	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C563	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
C564	24666100	ELECTROLYTIC, 10V 10UF M 3A
C565	24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
C566	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
C567	24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
C568	24109103	CERAMIC CHIP, 50V B 0.01UF K
C570	24669010	ELECTROLYTIC, 50V 1.0UF M 3A
C601	24109102	CERAMIC CHIP, 50V B 1000PF K
C602	24109102	CERAMIC CHIP, 50V B 1000PF K
C603	24669100	ELECTROLYTIC, 50V 10UF M 3A
C604	24669100	ELECTROLYTIC, 50V 10UF M 3A
C605	24667470	ELECTROLYTIC, 25V 47UF M 3A
C606	24667470	ELECTROLYTIC, 25V 47UF M 3A
C607	24503041	PLASTIC FILM , 63V 0.1UF J
C608	24503041	PLASTIC FILM , 63V 0.1UF J
C609	24669102	ELECTROLYTIC, 50V 1000UF M 3A
C610	24669102	ELECTROLYTIC, 50V 1000UF M 3A
C611	24667470	ELECTROLYTIC, 25V 47UF M 3A
C612	24794221	ELECTROIYTIC, 16V 220UF M
C661	24797010	ELECTROLYTIC, 50V 1UF M
C662	24797010	ELECTROLYTIC, 50V 1UF M
C663	24797010	ELECTROLYTIC, 50V 1UF M
C664	24797100	ELECTROLYTIC, 50V 10UF M
C665	24109103	CERAMIC CHIP, 50V B 0.01UF K
C666	24797010	ELECTROLYTIC, 50V 1UF M
C667	24794100	ELECTROLYTIC, 16V 10UF M
C680	24669471	ELECTROLYTIC, 50V 470UF M 3A
C681	24666100	ELECTROLYTIC, 10V 10UF M 3A
C682	24092538	CERAMIC CHIP, 10V F 1UF Z
C683	24092538	CERAMIC CHIP, 10V F 1UF Z
C690	24109103	CERAMIC CHIP, 50V B 0.01UF K
C704	24232103	CERAMIC DISC, 50V F 10000PF Z
C705	24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
C707	24797470	ELECTROLYTIC, 50V 47UF M
C712	24797470	ELECTROLYTIC, 50V 47UF M
C713	24790470	ELECTROLYTIC, 160V 47UF M
C715	24214472	CERAMIC DISC, 500C B 4700PF K
C717	24214472	CERAMIC DISC, 500C B 4700PF K
C718	24666470	ELECTORLYTIC, 16V 47UF M 3A
C719	24435560	CERAMIC DISC, 500V SL 56PF J
C720	24790220	ELECTROLYTIC, 160V 22UF M
C721	24666470	ELECTORLYTIC, 16V 47UF M 3A
C726	24212102	CERAMIC DISC, 50V B 1000PF K
C760	24797470	ELECTROLYTIC, 50V 47UF M
C761	24212102	CERAMIC DISC, 50V B 1000PF K
C762	24797470	ELECTROLYTIC, 50V 47UF M
C765	24214472	CERAMIC DISC, 500C B 4700PF K
C766	24214472	CERAMIC DISC, 500C B 4700PF K
C767	24790470	ELECTROLYTIC, 160V 47UF M
C768	24666470	ELECTORLYTIC, 16V 47UF M 3A
C769	24666470	ELECTORLYTIC, 16V 47UF M 3A
C770	24435560	CERAMIC DISC, 500V SL 56PF J
C771	24790220	ELECTROLYTIC, 160V 22UF M
C780	24797470	ELECTROLYTIC, 50V 47UF M
C781	24212102	CERAMIC DISC, 50V B 1000PF K
C782	24797470	ELECTROLYTIC, 50V 47UF M
C784	24214472	CERAMIC DISC, 500C B 4700PF K

Location No.	Parts No.	Description
C786	24214472	CERAMIC DISC, 500C B 4700PF K
C787	24790470	ELECTROLYTIC, 160V 47UF M
C788	24666470	ELECTORLYTIC, 16V 47UF M 3A
C789	24666470	ELECTORLYTIC, 16V 47UF M 3A
C790	24435560	CERAMIC DISC, 500V SL 56PF J
C791	24790220	ELECTROLYTIC, 160V 22UF M
C792	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C801	24503002	PLASTIC FILM, AC275V 0.22UF M
C810	24073119	200V1000U105C
C811	24092597	CERAMIC DISC CK45E AC250V 4700PF M
C812	24092597	CERAMIC DISC CK45E AC250V 4700PF M
C813	24092597	CERAMIC DISC CK45E AC250V 4700PF M
C814	24092593	CERAMIC DISC, AC250V E 1000PF M
C815	24092593	CERAMIC DISC, AC250V E 1000PF M
C830	24073037	ELECTROLYTIC, 16V 47UF M 3A
C831	24503047	PLASTIC FILM, 63V 0.33UF J
C832	24073038	ELECTROLYTIC, 16V 100UF M 3A
C833	24073037	ELECTROLYTIC, 16V 47UF M 3A
C834	24503047	PLASTIC FILM, 63V 0.33UF J
C835	24073016	ELECTROLYTIC CE04P 10V 100UF M 3A
C836	24073037	ELECTROLYTIC, 16V 47UF M 3A
C837	24503047	PLASTIC FILM, 63V 0.33UF J
C838	24073016	ELECTROLYTIC CE04P 10V 100UF M 3A
C840	24679220	ELECTROLYTIC, 250V 22UF M 3A
C841	24073043	ELECTROLYTIC, 16V 2200UF M 3A
C842	24503041	PLASTIC FILM , 63V 0.1UF J
C843	24092469	CERAMIC DISC, 2KV B 100PF K
C845	24073082	CHEMICON 04P 50V 2R2M
C851	24073073	ELECTROLYTIC, 35V 2200UF M 3A
C852	24073094	ELECTROLYTIC, 50V 1000UF M 3A
C853	24073057	ELECTROLYTIC, 25V 1000UF M 3A
C854	24073092	ELECTROLYTIC, 50V 330UF M 3A
C857	24073060	ELECTROLYTIC, 25V 4700UF M 3A
C858	24073060	ELECTROLYTIC, 25V 4700UF M 3A
C860	24214103	CERAMIC DISC, 500V B 10000PF K
C862	24092474	CERAMIC DISC, 2KV B 220PF K
C863	24503041	PLASTIC FILM , 63V 0.1UF J
C864	24092347	CERAMIC DISC, 2KV R 1500PF K
C865	24092347	CERAMIC DISC, 2KV R 1500PF K
C866	24503053	PLASTIC FILM, 63V 1UF J
C867	24591682	PLASTIC FILM, 50V 6800PF J
C868	24073067	ELECTROLYTIC CE04P 35V 47UF M 3A
C869	24678229	ELECTROLYTIC, 200V 2.2UF M 3A
C870	24503171	PLASTIC CAP T 630V 124J
C871	24092347	CERAMIC DISC, 2KV R 1500PF K
C873	24503045	PLASTIC FILM, 63V 0.22UF J
C874	24092474	CERAMIC DISC, 2KV B 220PF K
C876	24503041	PLASTIC FILM , 63V 0.1UF J
C877	24092347	CERAMIC DISC, 2KV R 1500PF K
C878	24503171	PLASTIC CAP T 630V 124J
C879	24212101	CERAMIC DISC, 50V B 100PF K
C882	24678478	ELECTROLYTIC, 200V 0.47UF M 3A
C884	24086916	ELECTROLYTIC CE692R 160V 330UF M 3D
C890	24073095	ELECTROLYTIC, 50V 2200UF M 3A
C891	24828333	PLASTIC FILM, 200V 33000PF J
C894	24073059	ELECTROLYTIC, 25V 3300UF M 3A
C895	24073044	ELECTROLYTIC, 16V 3300UF M 3A
C898	24092398	CERAMIC DISC, 25V 0.1UF Z, 24092398A NI TOOITSU
C901	24211102	CERAMIC DISC, 2KV B 1000PF K
C902	24794101	ELECTROLYTIC, 16V 100UF M
C903	24232103	CERAMIC DISC, 50V F 10000PF Z
C904	24436561	CERAMIC DISC, 50V SL 560PF J
C907	24214101	CERAMIC DISC, 500V B 100PF K
C908	24436390	CERAMIC DISC, 50V SL 39PFJ

Location No.	Parts No.	Description
C909	24794221	ELECTROIYTIC, 16V 220UF M
C911	24211102	CERAMIC DISC, 2KV B 1000PF K
C912	24794101	ELECTROLYTIC, 16V 100UF M
C913	24232103	CERAMIC DISC, 50V F 10000PF Z
C914	24436681	CERAMIC DISC, 50V SL 680PF J
C915	24679330	ELECTROLYTIC, 250V 33UF M 3A
C916	24794102	ELECTROLYTIC, 16V 1000UF M
C917	24214101	CERAMIC DISC, 500V B 100PF K
C918	24503041	PLASTIC FILM , 63V 0.1UF J
C919	24794221	ELECTROIYTIC, 16V 220UF M
C921	24211102	CERAMIC DISC, 2KV B 1000PF K
C922	24794101	ELECTROLYTIC, 16V 100UF M
C923	24436471	CERAMIC DISC, 50V SL 470PF J
C924	24232103	CERAMIC DISC, 50V F 10000PF Z
C926	24214101	CERAMIC DISC, 500V B 100PF K
C927	24503041	PLASTIC FILM , 63V 0.1UF J
C928	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
C929	24794221	ELECTROIYTIC, 16V 220UF M
C961	24763102	ELECTROLYTIC, 16V 1000UF M
C962	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
C963	24503041	PLASTIC FILM , 63V 0.1UF J
C964	24503041	PLASTIC FILM , 63V 0.1UF J
C967	24436331	CERAMIC DISC, 50V SL 330PF J
C7703	24503037	MT PLA CAP 63V 0.047UF J
C7704	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7706	24503047	PLASTIC FILM, 63V 0.33UF J
C7708	24105150	CERAMIC CHIP, 50V CH 15PF J
C7709	24105150	CERAMIC CHIP, 50V CH 15PF J
C7710	24105150	CERAMIC CHIP, 50V CH 15PF J
C7711	24105150	CERAMIC CHIP, 50V CH 15PF J
C7712	24105150	CERAMIC CHIP, 50V CH 15PF J
C7713	24105150	CERAMIC CHIP, 50V CH 15PF J
C7714	24105150	CERAMIC CHIP, 50V CH 15PF J
C7715	24105150	CERAMIC CHIP, 50V CH 15PF J
C7716	24105150	CERAMIC CHIP, 50V CH 15PF J
C7717	24105150	CERAMIC CHIP, 50V CH 15PF J
C7718	24105150	CERAMIC CHIP, 50V CH 15PF J
C7719	24105150	CERAMIC CHIP, 50V CH 15PF J
C7721	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7722	24105331	CERAMIC CHIP, 50V CH 330PF J
C7724	24669101	ELECTROLYTIC, 50V 100UF M 3A
C7725	24669101	ELECTROLYTIC, 50V 100UF M 3A
C7726	24105101	CERAMIC CHIP, 50V CH 100PF J
C7727	24105331	CERAMIC CHIP, 50V CH 330PF J
C7729	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7730	24105331	CERAMIC CHIP, 50V CH 330PF J
C7732	24105331	CERAMIC CHIP, 50V CH 330PF J
C7733	24105331	CERAMIC CHIP, 50V CH 330PF J
C7735	24669101	ELECTROLYTIC, 50V 100UF M 3A
C7736	24669101	ELECTROLYTIC, 50V 100UF M 3A
C7737	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7738	24105331	CERAMIC CHIP, 50V CH 330PF J
C7740	24105331	CERAMIC CHIP, 50V CH 330PF J
C7741	24105331	CERAMIC CHIP, 50V CH 330PF J
C7751	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7753	24567334	PLASTIC FILM, 50V 0.33UF J
C7766	24667221	ELECTROLYTIC, 25V 220UF M 3A
C7767	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7768	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7769	24109103	CERAMIC CHIP, 50V B 0.01UF K
C7770	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7772	24567334	PLASTIC FILM, 50V 0.33UF J
C7774	24105331	CERAMIC CHIP, 50V CH 330PF J
C7779	24105331	CERAMIC CHIP, 50V CH 330PF J
C7780	24105471	CERAMIC CHIP, 50V CH 470PF J

Location No.	Parts No.	Description
C7783	24105471	CERAMIC CHIP, 50V CH 470PF J
C7791	24667471	ELECTROLYTIC, 25V 470UF M 3A
C7792	24109472	CERAMIC CHIP, 50V B 4700PF K
C7793	24503041	PLASTIC FILM , 63V 0.1UF J
C7794	24503041	PLASTIC FILM , 63V 0.1UF J
C7795	24109223	CERAMIC CHIP, 25V B 0.022UF K
C7796	24669221	ELECTROLYTIC, 50V 220UF M 3A
C7797	24667471	ELECTROLYTIC, 25V 470UF M 3A
C7798	24669221	ELECTROLYTIC, 50V 220UF M 3A
C7810	24092511	CHIP CERA CAP 50V CH 471B
C7811	24105471	CERAMIC CHIP, 50V CH 470PF J
C7812	24109103	CERAMIC CHIP, 50V B 0.01UF K
C7813	24666220	ELECTROLYTIC, 16V 22UF M 3A
C7814	24666220	ELECTROLYTIC, 16V 22UF M 3A
C7815	24591223	PLASTIC FILM, 50V 0.022MF J
C7817	24109332	CERAMIC CHIP, 50V B 3300PF K
C7818	24109102	CERAMIC CHIP, 50V B 1000PF K
C7819	24109102	CERAMIC CHIP, 50V B 1000PF K
C7820	24109332	CERAMIC CHIP, 50V B 3300PF K
C7822	24503053	PLASTIC FILM, 63V 1UF J
C9100	24436331	CERAMIC DISC, 50V SL 330PF J
C9200	24436331	CERAMIC DISC, 50V SL 330PF J
CA04	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA05	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA06	24109392	CERAMIC CHIP, 50V B 3900PF K
CA07	24109392	CERAMIC CHIP, 50V B 3900PF K
CA08	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA09	24011683	CHIP, METAL FILM, 1/20W 68K OHM J
CA14	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA18	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA23	24105101	CERAMIC CHIP, 50V CH 100PF J
CA25	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA27	24092538	CERAMIC CHIP, 10V F 1UF Z
CA28	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA30	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA31	24092538	CERAMIC CHIP, 10V F 1UF Z
CA33	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA34	24092538	CERAMIC CHIP, 10V F 1UF Z
CA37	24105101	CERAMIC CHIP, 50V CH 100PF J
CA38	24105101	CERAMIC CHIP, 50V CH 100PF J
CA39	24105101	CERAMIC CHIP, 50V CH 100PF J
CA42	24109392	CERAMIC CHIP, 50V B 3900PF K
CA45	24105471	CERAMIC CHIP, 50V CH 470PF J
CA46	24105101	CERAMIC CHIP, 50V CH 100PF J
CA49	24105101	CERAMIC CHIP, 50V CH 100PF J
CA54	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA59	24105101	CERAMIC CHIP, 50V CH 100PF J
CA60	24105101	CERAMIC CHIP, 50V CH 100PF J
CA61	24666220	ELECTROLYTIC, 16V 22UF M 3A
CA68	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA69	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA71	24105331	CERAMIC CHIP, 50V CH 330PF J
CA72	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA73	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA80	24503041	PLASTIC FILM , 63V 0.1UF J
CA81	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA82	24503049	PLASTIC FILM, 63V 0.47UF J
CA251	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA331	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA611	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA701	24092538	CERAMIC CHIP, 10V F 1UF Z
CA705	24666100	ELECTROLYTIC, 10V 10UF M 3A
CB01	24794470	ELECTORLYTIC, 16V 47UF M
CB05	24666100	ELECTROLYTIC, 10V 10UF M 3A
CB13	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L

Location No.	Parts No.	Description
CB14	24105331	CERAMIC CHIP, 50V CH 330PF J
CB15	24794100	ELECTROLYTIC, 16V 10UF M
CB62	24105331	CERAMIC CHIP, 50V CH 330PF J
CB90	24109103	CERAMIC CHIP, 50V B 0.01UF K
CB91	24666100	ELECTROLYTIC, 10V 10UF M 3A
CD01	24797479	ELECTROLYTIC, 50V 4.7UF M
CD02	24797479	ELECTROLYTIC, 50V 4.7UF M
CD03	24503041	PLASTIC FILM , 63V 0.1UF J
CD04	24503041	PLASTIC FILM , 63V 0.1UF J
CD05	24590102	PLASTIC FILM, 50V 1000PF J
CD06	24503045	PLASTIC FILM, 63V 0.22UF J
CD07	24797229	ELECTROLYTIC, 50V 2.2UF M
CD08	24794221	ELECTROIYTIC, 16V 220UF M
CD09	24232103	CERAMIC DISC, 50V F 10000PF Z
CD10	24794470	ELECTORLYTIC, 16V 47UF M
CD11	24797479	ELECTROLYTIC, 50V 4.7UF M
CD12	24797479	ELECTROLYTIC, 50V 4.7UF M
CD13	24797479	ELECTROLYTIC, 50V 4.7UF M
CD14	24797479	ELECTROLYTIC, 50V 4.7UF M
CD15	24797479	ELECTROLYTIC, 50V 4.7UF M
CD16	24797479	ELECTROLYTIC, 50V 4.7UF M
CD17	24503045	PLASTIC FILM, 63V 0.22UF J
CD18	24590102	PLASTIC FILM, 50V 1000PF J
CD19	24567333	PLASTIC FILM, 50V 33000PF J
CD20	24503039	PLASTIC FILM, 63V 0.068UF J
CD21	24539104	PLASTIC FILM, 50V 0.1UF J
CD22	24797479	ELECTROLYTIC, 50V 4.7UF M
CD23	24797479	ELECTROLYTIC, 50V 4.7UF M
CD24	24590103	PLASTIC FILM, 50V 0.01MF J
CD25	24590103	PLASTIC FILM, 50V 0.01MF J
CD26	24590103	PLASTIC FILM, 50V 0.01MF J
CD41	24797479	ELECTROLYTIC, 50V 4.7UF M
CD42	24797479	ELECTROLYTIC, 50V 4.7UF M
CD43	24797479	ELECTROLYTIC, 50V 4.7UF M
CD44	24797479	ELECTROLYTIC, 50V 4.7UF M
CD45	24503041	PLASTIC FILM , 63V 0.1UF J
CD46	24567103	PLASTIC FILM, 50V 0.01UF J
CD47	24797478	ELECTROLYTIC, 50V 0.47UF M
CD48	24590472	PLASTIC FILM, 50V 4700PF J
CD49	24797478	ELECTROLYTIC, 50V 0.47UF M
CD60	24503041	PLASTIC FILM , 63V 0.1UF J
CD61	24763221	ELECTROLYTIC, 16V 220UF M
CD62	24232103	CERAMIC DISC, 50V F 10000PF Z
CD63	24762102	ELECTROLYTIC, 10V 1000UF M
CD64	24797479	ELECTROLYTIC, 50V 4.7UF M
CD65	24797100	ELECTROLYTIC, 50V 10UF M
CD66	24797100	ELECTROLYTIC, 50V 10UF M
CH001	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH004	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH005	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH006	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH007	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH008	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH009	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH010	24092743	CERAMIC CHIP, 10V F 470NF Z
CH011	24762221	ELECTROLYTIC, 10V 220UF M
CH012	24763101	ELECTROLYTIC, 16V 100UF M
CH013	24763101	ELECTROLYTIC, 16V 100UF M
CH014	24108101	CERAMIC CHIP, 50V SL 100PF J
CH015	24108330	CERAMIC CHIP, 50V SL 33PF J
CH016	24108330	CERAMIC CHIP, 50V SL 33PF J
CH017	24108330	CERAMIC CHIP, 50V SL 33PF J
CH018	24108330	CERAMIC CHIP, 50V SL 33PF J
CH019	24108330	CERAMIC CHIP, 50V SL 33PF J
CH020	24108330	CERAMIC CHIP, 50V SL 33PF J

Location No.	Parts No.	Description
CH040	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH041	24108101	CERAMIC CHIP, 50V SL 100PF J
CH042	24108101	CERAMIC CHIP, 50V SL 100PF J
CH043	24108101	CERAMIC CHIP, 50V SL 100PF J
CH044	24108101	CERAMIC CHIP, 50V SL 100PF J
CH051	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH052	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH053	24105070	CERAMIC CHIP CC73CH 50V 7PF D
CH061	24109103	CERAMIC CHIP, 50V B 0.01UF K
CH062	24092730	CERAMIC CHIP, 16V B 0.1UF K
CH063	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH101	24105070	CERAMIC CHIP CC73CH 50V 7PF D
CH102	24105070	CERAMIC CHIP CC73CH 50V 7PF D
CH241	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH244	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH247	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH249	24092730	CERAMIC CHIP, 16V B 0.1UF K
CH250	24092730	CERAMIC CHIP, 16V B 0.1UF K
CH301	24109472	CERAMIC CHIP, 50V B 4700PF K
CH302	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH303	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH304	24109472	CERAMIC CHIP, 50V B 4700PF K
CH305	24567104	PLASTIC FILM, 50V 0.1UF J
CH306	24567104	PLASTIC FILM, 50V 0.1UF J
CH307	24109472	CERAMIC CHIP, 50V B 4700PF K
CH308	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH309	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH310	24109472	CERAMIC CHIP, 50V B 4700PF K
CH311	24567104	PLASTIC FILM, 50V 0.1UF J
CH312	24567104	PLASTIC FILM, 50V 0.1UF J
CH313	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH314	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH315	24567104	PLASTIC FILM, 50V 0.1UF J
CH316	24567104	PLASTIC FILM, 50V 0.1UF J
CH317	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH318	24567104	PLASTIC FILM, 50V 0.1UF J
CH319	24567104	PLASTIC FILM, 50V 0.1UF J
CH320	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH321	24763101	ELECTROLYTIC, 16V 100UF M
CH322	24763101	ELECTROLYTIC, 16V 100UF M
CH401	24105220	CERAMIC CHIP, 50V CH 22PF J
CH402	24105220	CERAMIC CHIP, 50V CH 22PF J
CH403	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH404	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH407	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH408	24794100	ELECTROLYTIC, 16V 10UF M
CH409	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH413	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH414	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH501	24794470	ELECTORLYTIC, 16V 47UF M
CH502	24794470	ELECTORLYTIC, 16V 47UF M
CH503	24794470	ELECTORLYTIC, 16V 47UF M
CH504	24794470	ELECTORLYTIC, 16V 47UF M
CH505	24794470	ELECTORLYTIC, 16V 47UF M
CH506	24794470	ELECTORLYTIC, 16V 47UF M
CH511	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH512	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH513	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH514	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH515	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH516	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH517	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH518	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CH521	24105100	CERAMIC CHIP, 50V CH 10PF D
CH522	24590222	PLASTIC FILM, 50V 2200PF J

Location No.	Parts No.	Description
CH523	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH524	24105821	CERAMIC CHIP, 25V CH 820PF J
CH526	24105050	CERAMIC CHIP, 50V CH 5PF C
CH527	24105181	CERAMIC CHIP, 50V CH 180PF J
CH541	24105100	CERAMIC CHIP, 50V CH 10PF D
CH542	24590222	PLASTIC FILM, 50V 2200PF J
CH543	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH544	24105821	CERAMIC CHIP, 25V CH 820PF J
CH546	24105050	CERAMIC CHIP, 50V CH 5PF C
CH547	24105181	CERAMIC CHIP, 50V CH 180PF J
CH561	24105100	CERAMIC CHIP, 50V CH 10PF D
CH562	24590222	PLASTIC FILM, 50V 2200PF J
CH563	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH564	24105821	CERAMIC CHIP, 25V CH 820PF J
CH566	24105050	CERAMIC CHIP, 50V CH 5PF C
CH567	24105181	CERAMIC CHIP, 50V CH 180PF J
CH621	24105100	CERAMIC CHIP, 50V CH 10PF D
CH622	24590222	PLASTIC FILM, 50V 2200PF J
CH623	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH624	24105821	CERAMIC CHIP, 25V CH 820PF J
CH626	24105050	CERAMIC CHIP, 50V CH 5PF C
CH627	24105181	CERAMIC CHIP, 50V CH 180PF J
CH641	24105100	CERAMIC CHIP, 50V CH 10PF D
CH642	24590222	PLASTIC FILM, 50V 2200PF J
CH643	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH644	24105821	CERAMIC CHIP, 25V CH 820PF J
CH646	24105050	CERAMIC CHIP, 50V CH 5PF C
CH647	24105181	CERAMIC CHIP, 50V CH 180PF J
CH661	24105100	CERAMIC CHIP, 50V CH 10PF D
CH662	24590222	PLASTIC FILM, 50V 2200PF J
CH663	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CH664	24105821	CERAMIC CHIP, 25V CH 820PF J
CH666	24105050	CERAMIC CHIP, 50V CH 5PF C
CH667	24105181	CERAMIC CHIP, 50V CH 180PF J
CH707	24794470	ELECTORLYTIC, 16V 47UF M
CR12	24092730	CERAMIC CHIP, 16V B 0.1UF K
CR13	24092730	CERAMIC CHIP, 16V B 0.1UF K
CR14	24092730	CERAMIC CHIP, 16V B 0.1UF K
CR15	24092730	CERAMIC CHIP, 16V B 0.1UF K
CR16	24092730	CERAMIC CHIP, 16V B 0.1UF K
CR17	24092730	CERAMIC CHIP, 16V B 0.1UF K
CS03	24436221	CERAMIC DISC, 50V SL 220PF J
CS04	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
CS07	24436221	CERAMIC DISC, 50V SL 220PF J
CS08	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
CS09	24436331	CERAMIC DISC, 50V SL 330PF J
CS10	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS11	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
CS12	24436221	CERAMIC DISC, 50V SL 220PF J
CS13	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
CS14	24436221	CERAMIC DISC, 50V SL 220PF J
CS15	24436331	CERAMIC DISC, 50V SL 330PF J
CS16	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS21	24436101	CERAMIC DISC CC45 SL 50V100PF J
CS22	24436101	CERAMIC DISC CC45 SL 50V100PF J
CS24	24436331	CERAMIC DISC, 50V SL 330PF J
CS25	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS28	24436331	CERAMIC DISC, 50V SL 330PF J
CS29	24436331	CERAMIC DISC, 50V SL 330PF J
CS32	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CS33	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CS34	24436331	CERAMIC DISC, 50V SL 330PF J
CS35	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS36	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS38	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A

Location No.	Parts No.	Description
CS43	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CS45	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CS51	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS52	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS53	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS54	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CS55	24436331	CERAMIC DISC, 50V SL 330PF J
CS56	24436331	CERAMIC DISC, 50V SL 330PF J
CS57	24436331	CERAMIC DISC, 50V SL 330PF J
CS58	24436331	CERAMIC DISC, 50V SL 330PF J
CS60	24503041	PLASTIC FILM , 63V 0.1UF J
CS122	24797101	ELECTROLYTIC, 50V 100UF M
CS123	24797470	ELECTROLYTIC, 50V 47UF M
CS124	24797229	ELECTROLYTIC, 50V 2.2UF M
CS125	24590103	PLASTIC FILM, 50V 0.01MF J
CS652	24794220	ELECTROLYTIC, 16V 22UF M
CS676	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV01	24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
CV02	24232103	CERAMIC DISC, 50V F 10000PF Z
CV03	24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
CV04	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV05	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV08	24666102	ELECTROLYTIC, 16V 1000UF M 3A
CV10	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV13	24794100	ELECTROLYTIC, 16V 10UF M
CV14	24232103	CERAMIC DISC, 50V F 10000PF Z
CV15	24232103	CERAMIC DISC, 50V F 10000PF Z
CV17	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV21	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV22	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV23	24232103	CERAMIC DISC, 50V F 10000PF Z
CV24	24212102	CERAMIC DISC, 50V B 1000PF K
CV27	24762471	ELECTROLYTIC, 10V 470UF M
CV29	24763101	ELECTROLYTIC, 16V 100UF M
CV30	24232103	CERAMIC DISC, 50V F 10000PF Z
CV37	24797339	ELECTROLYTIO, 50V 3.3UF M
CV38	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CV39	24212102	CERAMIC DISC, 50V B 1000PF K
CV46	24232103	CERAMIC DISC, 50V F 10000PF Z
CV60	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CV61	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CV62	24232103	CERAMIC DISC, 50V F 10000PF Z
CV63	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV64	24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
CV65	24591122	PLASTIC FILM, 50V 1200PF J
CV66	24436561	CERAMIC DISC, 50V SL 560PF J
CV67	24591102	PLASTIC FILM, 50V 1000PF J
CV68	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
CV77	24763222	ELECTROLYTIC CE04G 16V 2200UF M
CV78	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV100	24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CV135	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CV136	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CV137	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CV138	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
CW09	24109103	CERAMIC CHIP, 50V B 0.01UF K
CX91	24092538	CERAMIC CHIP, 10V F 1UF Z
CY40	24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
RESISTORS		
R101	24383183	OXIDE METAL FILM, 2W 18K OHM J
R119	24000445	CHIP JUMPER, 1608TYPE
R150	24366101	CARBON FILM, 1/6W 100 OHM J
R151	24366562	CARBON FILM, 1/6W 5.6K OHM J
R152	24366103	CARBON FILM, 1/6W 10K OHM J

Location No.	Parts No.	Description
R171	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R172	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
R173	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R174	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
R205	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R206	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R241	24367153	CARBON FILM, 1/6W 15K OHM G
R242	24367333	CARBON FILM, 1/6W 33K OHM G
R243	24367223	CARBON FILM, 1/6W 22K OHM G
R244	24367223	CARBON FILM, 1/6W 22K OHM G
R245	24366124	CARBON FILM, 1/6W 120K OHM J
R246	24366102	CARBON FILM, 1/6W 1K OHM J
R247	24366474	CARBON FILM, 1/6W 470K OHM J
R249	24366472	CARBON FILM, 1/6W 4.7K OHM J
R250	24366472	CARBON FILM, 1/6W 4.7K OHM J
R251	24366101	CARBON FILM, 1/6W 100 OHM J
R252	24366103	CARBON FILM, 1/6W 10K OHM J
R301	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R302	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R303	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R304	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R305	24321129	OXIDE METAL FILM, 1/2W 1.2 OHM J
R306	24382151	OXIDE METAL FILM, 1W 150 OHM J
R307	24322828	OXIDE METAL FILM, 1W 0.82 OHM J
R308	24382391	OXIDE METAL FILM, 1W 390 OHM J
R309	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R310	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R311	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R312	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R313	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R314	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R315	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R317	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R321	24366103	CARBON FILM, 1/6W 10K OHM J
R322	24366101	CARBON FILM, 1/6W 100 OHM J
R323	24366103	CARBON FILM, 1/6W 10K OHM J
R324	24366183	CARBON FILM, 1/6W 18K OHM J
R325	24366113	CARBON FILM, 1/6W 11K OHM J
R326	24366471	CARBON FILM, 1/6W 470 OHM J
R327	24366471	CARBON FILM, 1/6W 470 OHM J
R328	24366562	CARBON FILM, 1/6W 5.6K OHM J
R329	24366103	CARBON FILM, 1/6W 10K OHM J
R331	24366473	CARBON FILM, 1/6W 47K OHM J
R332	24366821	CARBON FILM, 1/6W 820 OHM J
R333	24366102	CARBON FILM, 1/6W 1K OHM J
R334	24366153	CARBON FILM, 1/6W 15K OHM J
R335	24000245	METAL FILM, 1/4W 33K OHM F
R336	24000368	METAL FILM, 1/4W 2.7K OHM F
R337	24000203	METAL FILM, 1/4W 27K F
R338	24366103	CARBON FILM, 1/6W 10K OHM J
R339	24366472	CARBON FILM, 1/6W 4.7K OHM J
R341	24366472	CARBON FILM, 1/6W 4.7K OHM J
R342	24000633	METAL FILM, 1/4W 10K OHM F
R343	24366103	CARBON FILM, 1/6W 10K OHM J
R344	24366123	CARBON FILM, 1/6W 12K OHM J
R345	24000633	METAL FILM, 1/4W 10K OHM F
R346	24019119	METAL FILM, 1/6W 30K OHM J
R347	24019119	METAL FILM, 1/6W 30K OHM J
R348	24000525	METAL FILM, 1/4W 4.7K OHM F
R349	24366103	CARBON FILM, 1/6W 10K OHM J
R351	24366153	CARBON FILM, 1/6W 15K OHM J
R352	24366563	CARBON FILM, 1/6W 56K OHM J
R353	24366824	CARBON FILM, 1/6W 820K OHM J
R354	24366273	CARBON FILM, 1/6W 27K OHM J
R355	24366822	CARBON FILM, 1/6W 8.2K OHM J

Location No.	Parts No.	Description
R356	24366102	CARBON FILM, 1/6W 1K OHM J
R357	24366100	CARBON FILM, 1/6W 10 OHM J
R358	24366103	CARBON FILM, 1/6W 10K OHM J
R359	24366392	CARBON FILM, 1/6W 3.9K OHM J
R361	24366123	CARBON FILM, 1/6W 12K OHM J
R362	24366103	CARBON FILM, 1/6W 10K OHM J
R363	24366103	CARBON FILM, 1/6W 10K OHM J
R365	24366682	CARBON FILM, 1/6W 6.8K OHM J
R366	24366103	CARBON FILM, 1/6W 10K OHM J
R367	24366103	CARBON FILM, 1/6W 10K OHM J
R368	24366102	CARBON FILM, 1/6W 1K OHM J
R369	24366103	CARBON FILM, 1/6W 10K OHM J
R371	24366823	CARBON FILM, 1/6W 82K OHM J
R372	24366332	CARBON FILM, 1/6W 3.3K OHM J
R373	24366823	CARBON FILM, 1/6W 82K OHM J
R374	24366104	CARBON FILM, 1/6W 100K OHM J
R375	24366153	CARBON FILM, 1/6W 15K OHM J
R376	24366333	CARBON FILM, 1/6W 33K OHM J
R377	24366103	CARBON FILM, 1/6W 10K OHM J
R378	24366682	CARBON FILM, 1/6W 6.8K OHM J
R379	24366103	CARBON FILM, 1/6W 10K OHM J
R381	24366102	CARBON FILM, 1/6W 1K OHM J
R382	24366103	CARBON FILM, 1/6W 10K OHM J
R383	24366222	CARBON FILM, 1/6W 2.2K OHM J
R384	24019090	METAL FILM, 1/4W 330K OHM F
R385	24000633	METAL FILM, 1/4W 10K OHM F
R386	24000639	METAL FILM, 1/4W 22K OHM F
⚠ R388	24000141	METAL FILM, 1/4W 220 F
R401	24366223	CARBON FILM, 1/6W 22K OHM J
R402	24366223	CARBON FILM, 1/6W 22K OHM J
R403	24553101	OXIDE METAL FILM, 1W 100 OHM J
R404	24383101	OXIDE METAL FILM, 2W 100 OHM J
R405	24366103	CARBON FILM, 1/6W 10K OHM J
R406	24382222	OXIDE METAL FILM, 1W 2.2K OHM J
R407	24381100	OXIDE METAL FILM, 1/2W 10 OHM J
R408	24366101	CARBON FILM, 1/6W 100 OHM J
R409	24555220	OXIDE METAL FILM, 3W 22 OHM J
R410	24555220	OXIDE METAL FILM, 3W 22 OHM J
R411	24323479	METAL FILM, 2W 4.7 OHM J
R412	24366101	CARBON FILM, 1/6W 100 OHM J
R413	24366272	CARBON FILM, 1/6W 2.7K OHM J
R414	24366101	CARBON FILM, 1/6W 100 OHM J
R415	24533331	FUSIBLE, 2W 330 OHM J
R417	24366101	CARBON FILM, 1/6W 100 OHM J
R418	24366332	CARBON FILM, 1/6W 3.3K OHM J
R419	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R420	24382473	OXIDE METAL FILM, 1W 47K OHM J
R421	24377224	CARBON FILM, 1W 220K OHM J
R422	24376104	CARBON FILM, 1/2W 10OK OHM J
R423	24376104	CARBON FILM, 1/2W 10OK OHM J
R424	24322398	OXIDE METAL FILM, 1W 0.39 OHM J
R425	24366101	CARBON FILM, 1/6W 100 OHM J
R427	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R428	24310109	OXIDE METAL FILM, 1/2W 1 OHM J
R430	24383153	OXIDE METAL FILM, 2W 15K OHM J
R431	24383102	OXIDE METAL FILM, 2W 1K OHM J
R432	24376274	CARBON FILM, 1/2W 270K OHM J
R433	24376274	CARBON FILM, 1/2W 270K OHM J
R434	24376274	CARBON FILM, 1/2W 270K OHM J
R435	24366101	CARBON FILM, 1/6W 100 OHM J
R436	24382561	OXIDE METAL FILM, 1W 560 OHM J
R437	24382561	OXIDE METAL FILM, 1W 560 OHM J
R438	24382561	OXIDE METAL FILM, 1W 560 OHM J
R439	24366103	CARBON FILM, 1/6W 10K OHM J
R440	24366103	CARBON FILM, 1/6W 10K OHM J

Location No.	Parts No.	Description
R441	24366474	CARBON FILM, 1/6W 470K OHM J
R442	24366103	CARBON FILM, 1/6W 10K OHM J
R443	24366562	CARBON FILM, 1/6W 5.6K OHM J
R444	24366562	CARBON FILM, 1/6W 5.6K OHM J
R445	24366472	CARBON FILM, 1/6W 4.7K OHM J
R446	24366103	CARBON FILM, 1/6W 10K OHM J
R447	24366152	CARBON FILM, 1/6W 1.5K OHM J
R448	24366333	CARBON FILM, 1/6W 33K OHM J
R449	24366223	CARBON FILM, 1/6W 22K OHM J
R451	24366103	CARBON FILM, 1/6W 10K OHM J
R452	24366103	CARBON FILM, 1/6W 10K OHM J
R453	24366472	CARBON FILM, 1/6W 4.7K OHM J
R454	24366562	CARBON FILM, 1/6W 5.6K OHM J
R455	24019259	FUSIBLE, 1/4W 27 OHM G
R456	24366224	CARBON FILM, 1/6W 220K OHM J
R457	24366223	CARBON FILM, 1/6W 22K OHM J
R459	24366392	CARBON FILM, 1/6W 3.9K OHM J
R461	24366103	CARBON FILM, 1/6W 10K OHM J
R462	24366222	CARBON FILM, 1/6W 2.2K OHM J
R463	24366103	CARBON FILM, 1/6W 10K OHM J
R464	24366332	CARBON FILM, 1/6W 3.3K OHM J
R465	24366474	CARBON FILM, 1/6W 470K OHM J
R466	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R467	24366472	CARBON FILM, 1/6W 4.7K OHM J
R481	24322568	OXIDE METAL FILM, 1W 0.56 OHM J
R482	24552271	OXIDE METAL FILM, 1/2W 270 OHM J
R483	24552151	OXIDE METAL FILM, 1/2W 150 OHM J
R484	24366102	CARBON FILM, 1/6W 1K OHM J
R485	24000141	METAL FILM, 1/4W 220 F
⚠ R486	24000360	METAL FILM, 1/4W 1.2K OHM F
⚠ R487	24000147	METAL FILM, 1/4W 470 OHM F
R488	24366103	CARBON FILM, 1/6W 10K OHM J
R489	24366100	CARBON FILM, 1/6W 10 OHM J
R505	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R520	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R521	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R522	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R523	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R524	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R525	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R526	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R527	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R530	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R531	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R532	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R533	24552471	OXIDE METAL FILM, 1/2W 470 OHM J
R534	24552471	OXIDE METAL FILM, 1/2W 470 OHM J
R535	24552471	OXIDE METAL FILM, 1/2W 470 OHM J
R536	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
R537	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R538	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R539	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R540	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R541	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R542	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R543	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R544	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R545	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R546	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R563	24011390	METAL FILM CHIP, 1/20W 39 J
R564	24011560	CHIP, METAL FILM, 1/20W 56 OHM J
R565	24011560	CHIP, METAL FILM, 1/20W 56 OHM J
R601	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R602	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R603	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J

Location No.	Parts No.	Description
R604	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
R609	24366229	CARBON FILM, 1/6W 2.2 OHM J
R610	24366229	CARBON FILM, 1/6W 2.2 OHM J
R611	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
R612	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
R613	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R661	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R662	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
R663	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R665	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R666	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R667	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R668	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R669	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R671	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R672	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
R673	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R674	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R674	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R682	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R683	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R684	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R687	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R689	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R690	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R691	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R692	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R693	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R695	24000445	CHIP JUMPER, 1608TYPE
R695	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R702	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R709	24366563	CARBON FILM, 1/6W 56K OHM J
R713	24366273	CARBON FILM, 1/6W 27K OHM J
R715	24366273	CARBON FILM, 1/6W 27K OHM J
R716	24366273	CARBON FILM, 1/6W 27K OHM J
R717	24366333	CARBON FILM, 1/6W 33K OHM J
R718	24366101	CARBON FILM, 1/6W 100 OHM J
R719	24366100	CARBON FILM, 1/6W 10 OHM J
R720	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R722	24552471	OXIDE METAL FILM, 1/2W 470 OHM J
R723	24366101	CARBON FILM, 1/6W 100 OHM J
R724	24366151	CARBON FILM, 1/6W 150 OHM J
R725	24366222	CARBON FILM, 1/6W 2.2K OHM J
R730	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R731	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R732	24366470	CARBON FILM, 1/6W 47 OHM J
R733	24366683	CARBON FILM, 1/6W 68K OHM J
R734	24366470	CARBON FILM, 1/6W 47 OHM J
R735	24366683	CARBON FILM, 1/6W 68K OHM J
R736	24553330	OXIDE METAL FILM, 1W 33 OHM J
R737	24366751	CARBON FILM, 1/6W 750 OHM J
R738	24366102	CARBON FILM, 1/6W 1K OHM J
R739	24366751	CARBON FILM, 1/6W 750 OHM J
R740	24553330	OXIDE METAL FILM, 1W 33 OHM J
R741	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R742	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R743	24554221	OXIDE METAL FILM, 2W 220 OHM J
R744	24366122	CARBON FILM, 1/6W 1.2K OHM J
R745	24366122	CARBON FILM, 1/6W 1.2K OHM J
R755	24366333	CARBON FILM, 1/6W 33K OHM J
R761	24366273	CARBON FILM, 1/6W 27K OHM J
R762	24366563	CARBON FILM, 1/6W 56K OHM J
R763	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R764	24366470	CARBON FILM, 1/6W 47 OHM J
R765	24552100	OXIDE METAL FILM, 1/2W 10 OHM J

Location No.	Parts No.	Description
R766	24366470	CARBON FILM, 1/6W 47 OHM J
R767	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R768	24366751	CARBON FILM, 1/6W 750 OHM J
R769	24366122	CARBON FILM, 1/6W 1.2K OHM J
R770	24553330	OXIDE METAL FILM, 1W 33 OHM J
R771	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R772	24366683	CARBON FILM, 1/6W 68K OHM J
R773	24366683	CARBON FILM, 1/6W 68K OHM J
R774	24366751	CARBON FILM, 1/6W 750 OHM J
R775	24366122	CARBON FILM, 1/6W 1.2K OHM J
R776	24553330	OXIDE METAL FILM, 1W 33 OHM J
R777	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R778	24366102	CARBON FILM, 1/6W 1K OHM J
R779	24554221	OXIDE METAL FILM, 2W 220 OHM J
R781	24366273	CARBON FILM, 1/6W 27K OHM J
R782	24366563	CARBON FILM, 1/6W 56K OHM J
R783	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R784	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R785	24366470	CARBON FILM, 1/6W 47 OHM J
R786	24366751	CARBON FILM, 1/6W 750 OHM J
R787	24366122	CARBON FILM, 1/6W 1.2K OHM J
R788	24366683	CARBON FILM, 1/6W 68K OHM J
R789	24366683	CARBON FILM, 1/6W 68K OHM J
R790	24366751	CARBON FILM, 1/6W 750 OHM J
R791	24366122	CARBON FILM, 1/6W 1.2K OHM J
R792	24366102	CARBON FILM, 1/6W 1K OHM J
R793	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R794	24553330	OXIDE METAL FILM, 1W 33 OHM J
R795	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R796	24554221	OXIDE METAL FILM, 2W 220 OHM J
R797	24366470	CARBON FILM, 1/6W 47 OHM J
R798	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R799	24553330	OXIDE METAL FILM, 1W 33 OHM J
R810	24045011	CEMENT RES G 20W 1R2J
R818	24366102	CARBON FILM, 1/6W 1K OHM J
R819	24366103	CARBON FILM, 1/6W 10K OHM J
R840	24552562	OXIDE METAL FILM, 1/2W 5.6K OHM J
R841	24366102	CARBON FILM, 1/6W 1K OHM J
R842	24376563	CARB0N FILM, 1/2W 56K OHM J
R843	24376563	CARB0N FILM, 1/2W 56K OHM J
R844	24366103	CARBON FILM, 1/6W 10K OHM J
R861	24382153	OXIDE METAL FILM, 1W 15K OHM J
R862	24381330	OXIDE FILM, 1/2W 33 J
R864	24552102	OXIDE METAL FILM, 1/2W 1K OHM J
R865	24552470	OXIDE METAL FILM, 1/2W 47 OHM J
R866	24366103	CARBON FILM, 1/6W 10K OHM J
R867	24366223	CARBON FILM, 1/6W 22K OHM J
R868	24552560	OXIDE METAL FILM, 1/2W 56 OHM J
R870	24381271	OXIDE METAL FILM, 1/2W 270 OHM J
R871	24382820	OXIDE METAL FILM, 1W 82 OHM J
R872	24382124	OXIDE METAL FILM, 1W 120K OHM J
R873	24366150	CARBON FILM, 1/6W 15 OHM J
R882	24366101	CARBON FILM, 1/6W 100 OHM J
R883	24381682	OXIDE METAL FILM, 1/2W 6.8K OHM J
R884	24366222	CARBON FILM, 1/6W 2.2K OHM J
R891	24366152	CARBON FILM, 1/6W 1.5K OHM J
R899	24010001	CARBON FILM, 1/2W 3.9M OHM J
R900	24000892	FUSIBLE, 1W 1.2 OHM J
R901	24366101	CARBON FILM, 1/6W 100 OHM J
R902	24366331	CARBON FILM, 1/6W 330 OHM J
R903	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R904	24366222	CARBON FILM, 1/6W 2.2K OHM J
R905	24366330	CARBON FILM, 1/6W 33 OHM J
R906	24366331	CARBON FILM, 1/6W 330 OHM J
R908	24366220	CARBON FILM, 1/6W 22 OHM J

Location No.	Parts No.	Description
R909	24366330	CARBON FILM, 1/6W 33 OHM J
R910	24322568	OXIDE METAL FILM, 1W 0.56 OHM J
R911	24366101	CARBON FILM, 1/6W 100 OHM J
R913	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R914	24366222	CARBON FILM, 1/6W 2.2K OHM J
R915	24366270	CARBON FILM, 1/6W 27 OHM J
R916	24366331	CARBON FILM, 1/6W 330 OHM J
R917	24366331	CARBON FILM, 1/6W 330 OHM J
R918	24366220	CARBON FILM, 1/6W 22 OHM J
R919	24366270	CARBON FILM, 1/6W 27 OHM J
R920	24366103	CARBON FILM, 1/6W 10K OHM J
R921	24366101	CARBON FILM, 1/6W 100 OHM J
R922	24366331	CARBON FILM, 1/6W 330 OHM J
R923	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R924	24366222	CARBON FILM, 1/6W 2.2K OHM J
R925	24366390	CARBON FILM, 1/6W 39 OHM J
R926	24366331	CARBON FILM, 1/6W 330 OHM J
R927	24366100	CARBON FILM, 1/6W 10 OHM J
R928	24366220	CARBON FILM, 1/6W 22 OHM J
R929	24366330	CARBON FILM, 1/6W 33 OHM J
R930	24366153	CARBON FILM, 1/6W 15K OHM J
R931	24554153	OXIDE METAL FILM, 2W 15K OHM J
R932	24554153	OXIDE METAL FILM, 2W 15K OHM J
R935	24366820	CARBON FILM, 1/6W 82 OHM J
R936	24554153	OXIDE METAL FILM, 2W 15K OHM J
R937	24554153	OXIDE METAL FILM, 2W 15K OHM J
R938	24366150	CARBON FILM, 1/6W 15 OHM J
R941	24554153	OXIDE METAL FILM, 2W 15K OHM J
R942	24554153	OXIDE METAL FILM, 2W 15K OHM J
R943	24554153	OXIDE METAL FILM, 2W 15K OHM J
R944	24554153	OXIDE METAL FILM, 2W 15K OHM J
R945	24366150	CARBON FILM, 1/6W 15 OHM J
R948	24366153	CARBON FILM, 1/6W 15K OHM J
R949	24366153	CARBON FILM, 1/6W 15K OHM J
R951	24554153	OXIDE METAL FILM, 2W 15K OHM J
R952	24554153	OXIDE METAL FILM, 2W 15K OHM J
R953	24554153	OXIDE METAL FILM, 2W 15K OHM J
R954	24554153	OXIDE METAL FILM, 2W 15K OHM J
R956	24366101	CARBON FILM, 1/6W 100 OHM J
R959	24366150	CARBON FILM, 1/6W 15 OHM J
R961	24366152	CARBON FILM, 1/6W 1.5K OHM J
R962	24366102	CARBON FILM, 1/6W 1K OHM J
R963	24366100	CARBON FILM, 1/6W 10 OHM J
R964	24366332	CARBON FILM, 1/6W 3.3K OHM J
R965	24366471	CARBON FILM, 1/6W 470 OHM J
R966	24366331	CARBON FILM, 1/6W 330 OHM J
R967	24366681	CARBON FILM, 1/6W 680 OHM J
R968	24366470	CARBON FILM, 1/6W 47 OHM J
R969	24366683	CARBON FILM, 1/6W 68K OHM J
R970	24366393	CARBON FILM, 1/6W 39K OHM J
R971	24367821	CARBON FILM, 1/6W 820 OHM G
R972	24367471	CARBON FILM, 1/6W 470 OHM G
R973	24367681	CARBON FILM, 1/6W 680 OHM G
R974	24367681	CARBON FILM, 1/6W 680 OHM G
R975	24366561	CARBON FILM, 1/6W 560 OHM J
R976	24367472	CARBON FILM, 1/6W 4.7K OHM G
R977	24367512	CARBON FILM, 1/6W 5.1K OHM G
R978	24367391	CARBON FILM, 1/6W 390 OHM G
R983	24366681	CARBON FILM, 1/6W 680 OHM J
R984	24366821	CARBON FILM, 1/6W 820 OHM J
R985	24366821	CARBON FILM, 1/6W 820 OHM J
R986	24366821	CARBON FILM, 1/6W 820 OHM J
R987	24366470	CARBON FILM, 1/6W 47 OHM J
R991	24366562	CARBON FILM, 1/6W 5.6K OHM J
R992	24366153	CARBON FILM, 1/6W 15K OHM J

Location No.	Parts No.	Description
R995	24366330	CARBON FILM, 1/6W 33 OHM J
R4005	24366102	CARBON FILM, 1/6W 1K OHM J
R4010	24366102	CARBON FILM, 1/6W 1K OHM J
R4011	24366223	CARBON FILM, 1/6W 22K OHM J
R4012	24366223	CARBON FILM, 1/6W 22K OHM J
R4013	24366103	CARBON FILM, 1/6W 10K OHM J
R4014	24366222	CARBON FILM, 1/6W 2.2K OHM J
R4015	24000633	METAL FILM, 1/4W 10K OHM F
R4016	24366105	CARBON FILM, 1/6W 1M OHM J
R4017	24000639	METAL FILM, 1/4W 22K OHM F
R4018	24000203	METAL FILM, 1/4W 27K F
R4020	24000370	METAL FILM, 1/4W 3.3K OHM F
R4021	24000637	METAL FILM, 1/4W 15K OHM F
R4022	24000368	METAL FILM, 1/4W 2.7K OHM F
R4023	24366472	CARBON FILM, 1/6W 4.7K OHM J
R4024	24000203	METAL FILM, 1/4W 27K F
R4025	24000364	METAL FILM, 1/4W 1.8K OHM F
R4026	24383470	OXIDE METAL FILM, 2W 47 OHM J
R4030	24366102	CARBON FILM, 1/6W 1K OHM J
R4031	24366562	CARBON FILM, 1/6W 5.6K OHM J
R4032	24000639	METAL FILM, 1/4W 22K OHM F
R4033	24000147	METAL FILM, 1/4W 470 OHM F
R4034	24066864	VARIABLE RESISTOR
R4035	24000372	METAL FILM, 1/4W 3.9K OHM F
R4036	24366102	CARBON FILM, 1/6W 1K OHM J
R4502	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R4503	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R4505	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R4506	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4507	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4508	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R4509	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4513	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R4514	24000824	CHIP JUMPER, 2125TYPE
R4515	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R4516	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4517	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4521	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R4522	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4523	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4524	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4525	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4527	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4528	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4531	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4532	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R4533	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R4534	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R4535	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R4536	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R4538	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R4539	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R4541	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R4542	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
R4545	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4546	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4551	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4552	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4553	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7707	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7708	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7710	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7711	24547189	FUSIBLE, 1W 1.8 OHM J
R7712	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7713	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J

Location No.	Parts No.	Description
R7715	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7716	24547189	FUSIBLE, 1W 1.8 OHM J
R7717	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7718	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7720	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7721	24547189	FUSIBLE, 1W 1.8 OHM J
R7722	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7723	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7725	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7726	24547189	FUSIBLE, 1W 1.8 OHM J
R7727	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7728	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7730	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7731	24547189	FUSIBLE, 1W 1.8 OHM J
R7732	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7733	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7735	24383221	OXIDE METAL FILM, 2W 220 OHM J
R7736	24547189	FUSIBLE, 1W 1.8 OHM J
R7766	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R7767	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
R7775	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R7776	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7777	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R7778	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7779	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7780	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7781	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R7793	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
R7797	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7798	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7799	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R7836	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7837	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7841	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7842	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7843	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7844	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7845	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R7846	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7847	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7848	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7849	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R7861	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7862	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7864	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7865	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7866	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7867	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7868	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
R7871	24000358	METAL FILM, 1/4W 1K OHM F
R7872	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7880	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7881	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7882	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7883	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7884	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7885	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
R7886	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
R7887	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7888	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R7889	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
R7890	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R7891	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R7893	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7894	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J

Location No.	Parts No.	Description
R7895	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7896	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7897	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7898	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7899	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7904	24000247	METAL FILM, 1/4W 39K OHM F
R7906	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7910	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R7911	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7912	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7913	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7914	24381182	OXIDE METAL FILM, 1/2W 1.8K OHM J
R9501	24366470	CARBON FILM, 1/6W 47 OHM J
R9502	24366470	CARBON FILM, 1/6W 47 OHM J
R9503	24366681	CARBON FILM, 1/6W 680 OHM J
R9504	24366683	CARBON FILM, 1/6W 68K OHM J
R9505	24366393	CARBON FILM, 1/6W 39K OHM J
R9506	24366681	CARBON FILM, 1/6W 680 OHM J
R9507	24366330	CARBON FILM, 1/6W 33 OHM J
R9601	24366121	CARBON FILM, 1/6W 120 OHM J
R9602	24366682	CARBON FILM, 1/6W 6.8K OHM J
R9603	24366562	CARBON FILM, 1/6W 5.6K OHM J
R9604	24366272	CARBON FILM, 1/6W 2.7K OHM J
R9605	24366682	CARBON FILM, 1/6W 6.8K OHM J
R9606	24366272	CARBON FILM, 1/6W 2.7K OHM J
R9607	24366470	CARBON FILM, 1/6W 47 OHM J
R9608	24366681	CARBON FILM, 1/6W 680 OHM J
R9609	24366683	CARBON FILM, 1/6W 68K OHM J
R9610	24366393	CARBON FILM, 1/6W 39K OHM J
R9611	24366681	CARBON FILM, 1/6W 680 OHM J
R9612	24366470	CARBON FILM, 1/6W 47 OHM J
R9613	24366270	CARBON FILM, 1/6W 27 OHM J
R9614	24366300	CARBON FILM, 1/6W 30 OHM J
R9620	24366330	CARBON FILM, 1/6W 33 OHM J
R9701	24366103	CARBON FILM, 1/6W 10K OHM J
R9702	24366103	CARBON FILM, 1/6W 10K OHM J
R9703	24366103	CARBON FILM, 1/6W 10K OHM J
R9705	24366822	CARBON FILM, 1/6W 8.2K OHM J
R9706	24366682	CARBON FILM, 1/6W 6.8K OHM J
R9707	24366391	CARBON FILM, 1/6W 390 OHM J
R9708	24366821	CARBON FILM, 1/6W 820 OHM J
R9709	24366151	CARBON FILM, 1/6W 150 OHM J
R9710	24366332	CARBON FILM, 1/6W 3.3K OHM J
R9711	24366272	CARBON FILM, 1/6W 2.7K OHM J
R9712	24366222	CARBON FILM, 1/6W 2.2K OHM J
R9713	24366102	CARBON FILM, 1/6W 1K OHM J
R9714	24366102	CARBON FILM, 1/6W 1K OHM J
R9715	24366102	CARBON FILM, 1/6W 1K OHM J
RA01	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA04	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA06	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA07	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA08	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA09	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA12	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA13	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA14	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA15	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA16	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA18	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA21	24011102	CHIP, METAL FILM, 1/20W 1K OHM J

Location No.	Parts No.	Description
RA22	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RA23	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA26	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA28	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA30	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA32	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RA35	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RA36	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA37	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA38	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA39	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA40	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA41	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA42	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
RA43	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA44	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA45	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA46	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA49	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA50	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA51	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA52	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA54	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA55	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA59	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA60	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA71	24366273	CARBON FILM, 1/6W 27K OHM J
RA72	24366153	CARBON FILM, 1/6W 15K OHM J
RA72	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA73	24366822	CARBON FILM, 1/6W 8.2K OHM J
RA73	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RA74	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA75	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA76	24366822	CARBON FILM, 1/6W 8.2K OHM J
RA76	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA77	24366153	CARBON FILM, 1/6W 15K OHM J
RA77	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA78	24366273	CARBON FILM, 1/6W 27K OHM J
RA78	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA79	24366823	CARBON FILM, 1/6W 82K OHM J
RA79	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA80	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA81	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RA021	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA031	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA141	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA161	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA181	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA221	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA361	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA401	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RA431	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA703	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA705	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA708	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RB01	24366391	CARBON FILM, 1/6W 390 OHM J
RB03	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB04	24366473	CARBON FILM, 1/6W 47K OHM J
RB05	24366102	CARBON FILM, 1/6W 1K OHM J
RB05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB14	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RB15	24366471	CARBON FILM, 1/6W 470 OHM J
RB15	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RB16	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RB17	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J

Location No.	Parts No.	Description
RB19	24366470	CARBON FILM, 1/6W 47 OHM J
RB41	24366151	CARBON FILM, 1/6W 150 OHM J
RB61	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB62	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB64	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB65	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB81	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RB82	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB83	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB84	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RB90	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB91	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RB92	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RB93	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RB94	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB95	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB96	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RB97	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RB98	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB031	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB032	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB033	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB051	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB052	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB512	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
RB551	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB552	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB553	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RD01	24366102	CARBON FILM, 1/6W 1K OHM J
RD02	24366223	CARBON FILM, 1/6W 22K OHM J
RD03	24366101	CARBON FILM, 1/6W 100 OHM J
RD04	24366101	CARBON FILM, 1/6W 100 OHM J
RD06	24366472	CARBON FILM, 1/6W 4.7K OHM J
RD07	24366332	CARBON FILM, 1/6W 3.3K OHM J
RD09	24366104	CARBON FILM, 1/6W 100K OHM J
RD10	24366472	CARBON FILM, 1/6W 4.7K OHM J
RD11	24366332	CARBON FILM, 1/6W 3.3K OHM J
RD12	24366101	CARBON FILM, 1/6W 100 OHM J
RD13	24366104	CARBON FILM, 1/6W 100K OHM J
RD14	24366221	CARBON FILM, 1/6W 220 OHM J
RD15	24366104	CARBON FILM, 1/6W 100K OHM J
RD16	24366123	CARBON FILM, 1/6W 12K OHM J
RD17	24366101	CARBON FILM, 1/6W 100 OHM J
RD18	24366223	CARBON FILM, 1/6W 22K OHM J
RD19	24366102	CARBON FILM, 1/6W 1K OHM J
RD41	24366102	CARBON FILM, 1/6W 1K OHM J
RD42	24366432	CARBON FILM, 1/6W 4.3K OHM J
RD43	24366114	CARBON FILM, 1/6W 110K OHM J
RD44	24366132	CARBON FILM, 1/6W 1.3K OHM J
RD45	24366473	CARBON FILM, 1/6W 47K OHM J
RD46	24366513	CARBON FILM, 1/6W 51K OHM J
RD47	24366392	CARBON FILM, 1/6W 3.9K OHM J
RD63	24366103	CARBON FILM, 1/6W 10K OHM J
RD64	24366103	CARBON FILM, 1/6W 10K OHM J
RD65	24366122	CARBON FILM, 1/6W 1.2K OHM J
RD66	24366821	CARBON FILM, 1/6W 820 OHM J
RD67	24366152	CARBON FILM, 1/6W 1.5K OHM J
RD68	24366681	CARBON FILM, 1/6W 680 OHM J
RD69	24366101	CARBON FILM, 1/6W 100 OHM J
RD70	24366105	CARBON FILM, 1/6W 1M OHM J
RD71	24366101	CARBON FILM, 1/6W 100 OHM J
RD72	24366105	CARBON FILM, 1/6W 1M OHM J
RH002	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RH003	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RH004	24011221	CHIP, METAL FILM, 1/20W 220 OHM J

Location No.	Parts No.	Description
RH005	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RH006	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RH007	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RH008	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RH009	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH041	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH042	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH043	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH044	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH051	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RH061	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RH062	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH063	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH064	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH201	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH202	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH205	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH206	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH207	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RH208	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RH209	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH210	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH211	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RH212	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RH301	24011684	CHIP, METAL FILM, 1/20W 680K OHM J
RH302	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH303	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RH304	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RH305	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH306	24011684	CHIP, METAL FILM, 1/20W 680K OHM J
RH307	24011684	CHIP, METAL FILM, 1/20W 680K OHM J
RH308	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH309	24011203	CHIP, METAL FILM, 1/20W 20K OHM J
RH310	24011203	CHIP, METAL FILM, 1/20W 20K OHM J
RH311	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH312	24011684	CHIP, METAL FILM, 1/20W 680K OHM J
RH313	24011474	CHIP, METAL FILM, 1/20W 470K OHM J
RH314	24011474	CHIP, METAL FILM, 1/20W 470K OHM J
RH315	24011474	CHIP, METAL FILM, 1/20W 470K OHM J
RH316	24011474	CHIP, METAL FILM, 1/20W 470K OHM J
RH317	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH318	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH319	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH320	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH321	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH322	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH323	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH324	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH325	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RH326	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RH327	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RH328	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH329	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RH330	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH331	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RH332	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH333	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RH334	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH335	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RH336	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RH337	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RH338	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RH339	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH340	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH341	24011101	CHIP, METAL FILM, 1/20W 100 OHM J

Location No.	Parts No.	Description
RH342	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH343	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH344	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH345	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH346	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH347	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RH401	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH402	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH404	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH405	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH406	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RH407	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH408	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH412	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH413	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RH414	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH415	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH416	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH417	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH420	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RH421	24011681	CHIP, METAL FILM, 1/20W 680 OHM J
RH422	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RH425	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RH427	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RH428	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH429	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RH430	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RH431	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH501	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH502	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH503	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH504	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH506	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH507	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH508	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH509	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RH521	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH522	24998103	CHIP, 1/16W 10K OHM
RH523	24998103	CHIP, 1/16W 10K OHM
RH524	24998103	CHIP, 1/16W 10K OHM
RH525	24998103	CHIP, 1/16W 10K OHM
RH526	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH527	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH528	24998103	CHIP, 1/16W 10K OHM
RH529	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH541	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH542	24998103	CHIP, 1/16W 10K OHM
RH543	24998103	CHIP, 1/16W 10K OHM
RH544	24998103	CHIP, 1/16W 10K OHM
RH545	24998103	CHIP, 1/16W 10K OHM
RH546	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH547	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH548	24998103	CHIP, 1/16W 10K OHM
RH549	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH561	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH562	24998103	CHIP, 1/16W 10K OHM
RH563	24998103	CHIP, 1/16W 10K OHM
RH564	24998103	CHIP, 1/16W 10K OHM
RH565	24998103	CHIP, 1/16W 10K OHM
RH566	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH567	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH568	24998103	CHIP, 1/16W 10K OHM
RH569	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH621	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH622	24998103	CHIP, 1/16W 10K OHM

Location No.	Parts No.	Description
RH623	24998103	CHIP, 1/16W 10K OHM
RH624	24998103	CHIP, 1/16W 10K OHM
RH625	24998103	CHIP, 1/16W 10K OHM
RH626	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH627	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH628	24998103	CHIP, 1/16W 10K OHM
RH629	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH641	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH642	24998103	CHIP, 1/16W 10K OHM
RH643	24998103	CHIP, 1/16W 10K OHM
RH644	24998103	CHIP, 1/16W 10K OHM
RH645	24998103	CHIP, 1/16W 10K OHM
RH646	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH647	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH648	24998103	CHIP, 1/16W 10K OHM
RH648	24998103	CHIP, 1/16W 10K OHM
RH649	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH661	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RH662	24998103	CHIP, 1/16W 10K OHM
RH663	24998103	CHIP, 1/16W 10K OHM
RH664	24998103	CHIP, 1/16W 10K OHM
RH665	24998103	CHIP, 1/16W 10K OHM
RH666	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RH667	24998683	CHIP, METAL FILM, 1/16W 68K OHM D
RH668	24998103	CHIP, 1/16W 10K OHM
RH669	24011911	CHIP, METAL FILM, 1/20W 910 OHM J
RR15	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
RR16	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
RR17	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
RR52	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR53	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR54	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR55	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR56	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR57	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR61	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RR62	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RR63	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS02	24366472	CARBON FILM, 1/6W 4.7K OHM J
RS04	24366102	CARBON FILM, 1/6W 1K OHM J
RS06	24366102	CARBON FILM, 1/6W 1K OHM J
RS07	24366103	CARBON FILM, 1/6W 10K OHM J
RS08	24366103	CARBON FILM, 1/6W 10K OHM J
RS09	24366102	CARBON FILM, 1/6W 1K OHM J
RS10	24366102	CARBON FILM, 1/6W 1K OHM J
RS12	24366103	CARBON FILM, 1/6W 10K OHM J
RS21	24366104	CARBON FILM, 1/6W 100K OHM J
RS22	24366104	CARBON FILM, 1/6W 100K OHM J
RS25	24366223	CARBON FILM, 1/6W 22K OHM J
RS26	24366223	CARBON FILM, 1/6W 22K OHM J
RS27	24366471	CARBON FILM, 1/6W 470 OHM J
RS28	24366471	CARBON FILM, 1/6W 470 OHM J
RS29	24366104	CARBON FILM, 1/6W 100K OHM J
RS30	24366104	CARBON FILM, 1/6W 100K OHM J
RS31	24366103	CARBON FILM, 1/6W 10K OHM J
RS32	24366104	CARBON FILM, 1/6W 100K OHM J
RS33	24366222	CARBON FILM, 1/6W 2.2K OHM J
RS34	24366222	CARBON FILM, 1/6W 2.2K OHM J
RS35	24366103	CARBON FILM, 1/6W 10K OHM J
RS36	24366103	CARBON FILM, 1/6W 10K OHM J
RS37	24366101	CARBON FILM, 1/6W 100 OHM J
RS40	24366101	CARBON FILM, 1/6W 100 OHM J
RS42	24366101	CARBON FILM, 1/6W 100 OHM J
RS48	24366101	CARBON FILM, 1/6W 100 OHM J
RS49	24366103	CARBON FILM, 1/6W 10K OHM J

Location No.	Parts No.	Description
RS51	24366103	CARBON FILM, 1/6W 10K OHM J
RS52	24366103	CARBON FILM, 1/6W 10K OHM J
RS53	24366103	CARBON FILM, 1/6W 10K OHM J
RS54	24366103	CARBON FILM, 1/6W 10K OHM J
RS120	24552821	OXIDE METAL FILM, 1/2W 820 OHM J
RS121	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS122	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS123	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS124	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS125	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS651	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS652	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS665	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS671	24000445	CHIP JUMPER, 1608TYPE
RS672	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RS673	24000445	CHIP JUMPER, 1608TYPE
RS674	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RS675	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RS676	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS683	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS685	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS686	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS687	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV01	24366472	CARBON FILM, 1/6W 4.7K OHM J
RV03	24366101	CARBON FILM, 1/6W 100 OHM J
RV04	24366101	CARBON FILM, 1/6W 100 OHM J
RV11	24366100	CARBON FILM, 1/6W 10 OHM J
RV12	24366100	CARBON FILM, 1/6W 10 OHM J
RV13	24366100	CARBON FILM, 1/6W 10 OHM J
RV15	24366222	CARBON FILM, 1/6W 2.2K OHM J
RV20	24366750	CARBON FILM, 1/6W 75 OHM J
RV21	24366750	CARBON FILM, 1/6W 75 OHM J
RV22	24366750	CARBON FILM, 1/6W 75 OHM J
RV23	24366332	CARBON FILM, 1/6W 3.3K OHM J
RV24	24366750	CARBON FILM, 1/6W 75 OHM J
RV25	24366750	CARBON FILM, 1/6W 75 OHM J
RV26	24366750	CARBON FILM, 1/6W 75 OHM J
RV31	24366332	CARBON FILM, 1/6W 3.3K OHM J
RV31	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV32	24366750	CARBON FILM, 1/6W 75 OHM J
RV32	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV38	24872184	CHIP, METAL FILM, 1/16W 180K OHM J
RV39	24872334	CHIP, METAL FILM, 1/16W 330K OHM J
RV50	24872472	CHIP, METAL FILM, 1/16W 4.7K OHM J
RV51	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV63	24366102	CARBON FILM, 1/6W 1K OHM J
RV64	24366750	CARBON FILM, 1/6W 75 OHM J
RV65	24366750	CARBON FILM, 1/6W 75 OHM J
RV67	24366750	CARBON FILM, 1/6W 75 OHM J
RV74	24366750	CARBON FILM, 1/6W 75 OHM J
RV81	24366472	CARBON FILM, 1/6W 4.7K OHM J
RV83	24366332	CARBON FILM, 1/6W 3.3K OHM J
RV84	24366750	CARBON FILM, 1/6W 75 OHM J
RV85	24552181	OXIDE METAL FILM, 1/2W 180 OHM J
RV89	24366680	CARBON FILM, 1/6W 68 OHM J
RV93	24366101	CARBON FILM, 1/6W 100 OHM J
RV97	24366221	CARBON FILM, 1/6W 220 OHM J
RV117	24366750	CARBON FILM, 1/6W 75 OHM J
RV118	24366750	CARBON FILM, 1/6W 75 OHM J
RV119	24366750	CARBON FILM, 1/6W 75 OHM J
RV124	24366392	CARBON FILM, 1/6W 3.9K OHM J
RV125	24366123	CARBON FILM, 1/6W 12K OHM J
RV126	24366274	CARBON FILM, 1/6W 270K OHM J
RV127	24366331	CARBON FILM, 1/6W 330 OHM J
RV128	24366472	CARBON FILM, 1/6W 4.7K OHM J

Location No.	Parts No.	Description
RV140	24366103	CARBON FILM, 1/6W 10K OHM J
RV141	24366302	CARBON FILM, 1/6W 3K OHM J
RV142	24366103	CARBON FILM, 1/6W 10K OHM J
RV143	24366103	CARBON FILM, 1/6W 10K OHM J
RV144	24366472	CARBON FILM, 1/6W 4.7K OHM J
RV169	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV178	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RV179	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RV180	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RV181	24011681	CHIP, METAL FILM, 1/20W 680 OHM J
RV182	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV183	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV184	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RV185	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RV186	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RW10	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RW11	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RW12	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RW30	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RW31	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RW32	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RW33	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RW34	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RW40	24366182	CARBON FILM, 1/6W 1.8K OHM J
RW45	24366103	CARBON FILM, 1/6W 10K OHM J
RX11	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RX12	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RY80	24366331	CARBON FILM, 1/6W 330 OHM J
RY81	24366101	CARBON FILM, 1/6W 100 OHM J
RY82	24366102	CARBON FILM, 1/6W 1K OHM J
RY87	24366100	CARBON FILM, 1/6W 10 OHM J
COILS & TRANSFORMERS		
L101	23289845	COIL, PEAKING 68.00MMHJ, COLTRF4680AT
L103	23289844	COIL, PEAKING, TRF4470AT
L111	23289845	COIL, PEAKING 68.00MMHJ, COLTRF4680AT
L113	23289842	COIL, PEAKING, TRF4220AT
L115	23103852	COIL, FILTER, TEM2028AH
L121	23238562	COIL, PEAKING, TRF4109AJ
L122	23238562	COIL, PEAKING, TRF4109AJ
L301	23237975	COIL, PEAKING, TRF4101AC
L302	23248073	COIL, CHOKE, TLN3299D
L303	23248073	COIL, CHOKE, TLN3299D
L304	23103859	COIL, CHOKE, TEM2011
L305	23103775	COIL, FERRITE CHOKE, TEM2014
L401	23289560	COIL, PEAKING, TRF4560AF
L402	23103880	COIL, CHOKE, TEM2011Y
⚠ L403	23248248	COIL, CHOKE, TLN3500AH
L404	23248191	COIL, CHOKE, TLN3351AD
L405	23103775	COIL, FERRITE CHOKE, TEM2014
L406	23103775	COIL, FERRITE CHOKE, TEM2014
L410	23289120	COIL, PEAKING, TRF4120AF
⚠ L441	23233995	COIL, LINEARITY, TLN2215AG
L450	23237975	COIL, PEAKING, TRF4101AC
⚠ L462	23231346	DEFLECTION YOKE, TDY707PDE
⚠ L463	23231346	DEFLECTION YOKE, TDY707PDE
⚠ L464	23231346	DEFLECTION YOKE, TDY707PDE
L472	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L473	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L474	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L502	23289120	COIL, PEAKING, TRF4120AF
L503	23289120	COIL, PEAKING, TRF4120AF
L510	23103845	COIL, COMMONMODE, TEM2030AY
L511	23103845	COIL, COMMONMODE, TEM2030AY
L701	23237987	COIL, PEAKING, TRF4100AC

Location No.	Parts No.	Description
L702	23261974	COIL, FERRITE BEAD, HC5-035
L704	23103859	COIL, CHOKE, TEM2011
L705	23103859	COIL, CHOKE, TEM2011
L762	23103859	COIL, CHOKE, TEM2011
L764	23103859	COIL, CHOKE, TEM2011
L765	23103859	COIL, CHOKE, TEM2011
L766	23261974	COIL, FERRITE BEAD, HC5-035
L769	23237987	COIL, PEAKING, TRF4100AC
L780	23237987	COIL, PEAKING, TRF4100AC
L781	23103859	COIL, CHOKE, TEM2011
L782	23103859	COIL, CHOKE, TEM2011
L783	23261974	COIL, FERRITE BEAD, HC5-035
L813	23103880	COIL, CHOKE, TEM2011Y
L840	23280019	COIL, PEAKING, TRF4330AZ
L851	23103880	COIL, CHOKE, TEM2011Y
L852	23103880	COIL, CHOKE, TEM2011Y
L853	23103880	COIL, CHOKE, TEM2011Y
L854	23103880	COIL, CHOKE, TEM2011Y
L861	23103880	COIL, CHOKE, TEM2011Y
L862	23103880	COIL, CHOKE, TEM2011Y
L881	23103880	COIL, CHOKE, TEM2011Y
L882	23103880	COIL, CHOKE, TEM2011Y
L885	23248073	COIL, CHOKE, TLN3299D
L888	23103880	COIL, CHOKE, TEM2011Y
L889	23103880	COIL, CHOKE, TEM2011Y
L891	23103880	COIL, CHOKE, TEM2011Y
L892	23103880	COIL, CHOKE, TEM2011Y
L893	23103880	COIL, CHOKE, TEM2011Y
L894	23103880	COIL, CHOKE, TEM2011Y
L895	23248247	COIL, CHOKE, TLN3499AH
L896	23248235	COIL, CHOKE 12X18H 22MMH 4.2A, TLN3462AF
L897	23248087	COIL, CHOKE, TLN3312D
L898	23248087	COIL, CHOKE, TLN3312D
L902	23289100	COIL, PEAKING, TRF4100AF
L903	23289560	COIL, PEAKING, TRF4560AF
L911	23237987	COIL, PEAKING, TRF4100AC
L912	23289680	COIL, PEAKING, TRF4680AF
L913	23289100	COIL, PEAKING, TRF4100AF
L915	23289100	COIL, PEAKING, TRF4100AF
L922	23289680	COIL, PEAKING, TRF4680AF
L923	23289150	COIL, PEAKING, TRF4150AF
L925	23289100	COIL, PEAKING, TRF4100AF
L961	23238714	COIL, PEAKING, TRF4100AJ
L962	23289100	COIL, PEAKING, TRF4100AF
L7701	23103859	COIL, CHOKE, TEM2011
L7702	23103859	COIL, CHOKE, TEM2011
L7703	23103859	COIL, CHOKE, TEM2011
L7704	23103859	COIL, CHOKE, TEM2011
L7705	23103859	COIL, CHOKE, TEM2011
L7706	23103859	COIL, CHOKE, TEM2011
L7708	23103859	COIL, CHOKE, TEM2011
L7709	23103859	COIL, CHOKE, TEM2011
L7710	23248195	COIL, CHOKE, TLN3441AT
L7711	23248195	COIL, CHOKE, TLN3441AT
L7712	23248031	COIL, CHOKE, TLN3274D
L7713	23248031	COIL, CHOKE, TLN3274D
LH001	23103864	COIL, FILTER, TEM2103T
LH002	23103864	COIL, FILTER, TEM2103T
LH003	23103859	COIL, CHOKE, TEM2011
LH004	23103859	COIL, CHOKE, TEM2011
LH005	23103859	COIL, CHOKE, TEM2011
LH009	23103795	IMPEDER, MMZ2012S301A
LH010	23103795	IMPEDER, MMZ2012S301A
LH012	23103859	COIL, CHOKE, TEM2011

Location No.	Parts No.	Description
LH061	23103864	COIL, FILTER, TEM2103T
LH062	23103864	COIL, FILTER, TEM2103T
LH063	23103864	COIL, FILTER, TEM2103T
LH064	23103864	COIL, FILTER, TEM2103T
LH065	23103864	COIL, FILTER, TEM2103T
LH066	23103864	COIL, FILTER, TEM2103T
LH067	23103864	COIL, FILTER, TEM2103T
LH122	23103864	COIL, FILTER, TEM2103T
LH124	23103864	COIL, FILTER, TEM2103T
LH125	23103864	COIL, FILTER, TEM2103T
LH126	23103864	COIL, FILTER, TEM2103T
LH301	23103859	COIL, CHOKE, TEM2011
LH302	23103859	COIL, CHOKE, TEM2011
LH401	23245830	COIL, CHIP, TRF4100CB
LH402	23103864	COIL, FILTER, TEM2103T
LH403	23103864	COIL, FILTER, TEM2103T
LH404	23103864	COIL, FILTER, TEM2103T
LH405	23103864	COIL, FILTER, TEM2103T
LH411	23103864	COIL, FILTER, TEM2103T
LH521	23289102	COIL. PEAKING, TRF4102AF
LH522	23289471	COIL, PEAKING, TRF4471AF
LH541	23289102	COIL. PEAKING, TRF4102AF
LH542	23289471	COIL, PEAKING, TRF4471AF
LH561	23289102	COIL. PEAKING, TRF4102AF
LH562	23289471	COIL, PEAKING, TRF4471AF
LH621	23289102	COIL. PEAKING, TRF4102AF
LH622	23289471	COIL, PEAKING, TRF4471AF
LH641	23289102	COIL. PEAKING, TRF4102AF
LH642	23289471	COIL, PEAKING, TRF4471AF
LH661	23289102	COIL. PEAKING, TRF4102AF
LH662	23289471	COIL, PEAKING, TRF4471AF
LH800	23103795	IMPEDER, MMZ2012S301A
LV05	23289560	COIL, PEAKING, TRF4560AF
LV06	23289560	COIL, PEAKING, TRF4560AF
LV07	23289100	COIL, PEAKING, TRF4100AF
LV10	23289100	COIL, PEAKING, TRF4100AF
LV13	23289100	COIL, PEAKING, TRF4100AF
LV14	23289100	COIL, PEAKING, TRF4100AF
LV20	23238705	COIL, PEAKING, TRF4560AJ
LY22	23103852	COIL, FILTER, TEM2028AH
T400	23224364	TRANSFORMER, FOCUS, TLN2168AH
T401	23224371	TRANSFORMER, HORIZ DRIVE, TLN1080AH
⚠ T461A	23192961	ANODE CAP ASSY, TCC5605AU
T802	23211759	COIL, LF LH35V 21990A
T840	23217431	TRANSFORMER, CONVERTER, TPW3425AH
T862	23217560	CONV EER40 50H82

SEMICONDUCTORS

Q151	23205123	TRANSISTOR, 2SA933ASQ
Q152	23114528	TRANSISTOR, 2SC1740S
Q171	23205057	TRANSISTOR, KTC3875Y
Q172	23205057	TRANSISTOR, KTC3875Y
Q201	23205057	TRANSISTOR, KTC3875Y
Q221	23114756	TRANSISTOR, 2SC2482
Q301	23319787	IC, LA7833S
Q301B	70391355	SCREW, 3X8MM
Q302	23205054	TRANSISTOR, KTA1504Y
Q305	23904896	IC, JLC1562BF
Q321	70119059	IC, OP AMP, TA75902P(J)
Q322	23905266	IC, TA8859CP
Q323	23314965	TRANSISTOR, KTC3198 Y
Q324	70119059	IC, OP AMP, TA75902P(J)
Q325	23314965	TRANSISTOR, KTC3198 Y
Q326	23314962	TRANSISTOR, KTA1266 Y
Q327	23314965	TRANSISTOR, KTC3198 Y

Location No.	Parts No.	Description
Q328	23114462	TRANSISTOR, RN1202
Q329	23114461	TRANSISTOR, RN1203
Q400	23205079	TRANSISTOR, 2SC4686A
Q401	23205166	TRANSISTOR, FET, 2SK2962
Q402	23314962	TRANSISTOR, KTA1266 Y
Q403	23314965	TRANSISTOR, KTC3198 Y
Q404	23205149	TRANSISTOR, 2SC5859(FA)
Q404B	72471082	SCREW, 3X10MM
Q404D	23850638	INSULATOR, TRANSISTOR, AC263 (NO SERVICE PART)
Q405	23114437	TRANSISTOR, 2SC752GTM-Y
Q406	70128158	IC, BA10393
Q407	23319808	IC, M5218AP
Q408	23205031	TRANSISTOR, FET, 2SK2920
Q409	23314965	TRANSISTOR, KTC3198 Y
Q410	23319203	IC, MC7812CT
Q411	23114756	TRANSISTOR, 2SC2482
Q420	23316816	IC, LA7860
Q421	23114437	TRANSISTOR, 2SC752GTM-Y
Q431	70114402	TRANSISTOR, 2SC3437-Y
Q432	70114402	TRANSISTOR, 2SC3437-Y
Q434	70114402	TRANSISTOR, 2SC3437-Y
Q435	70114402	TRANSISTOR, 2SC3437-Y
Q436	23205057	TRANSISTOR, KTC3875Y
Q437	23000370	IC, TA1318N
Q510	23009251	IC, TA1360N(MOD)
Q520	23205123	TRANSISTOR, 2SA933ASQ
Q521	23205123	TRANSISTOR, 2SA933ASQ
Q522	23205123	TRANSISTOR, 2SA933ASQ
Q523	23205057	TRANSISTOR, KTC3875Y
Q524	23114502	TRANSISTOR, RN1401
Q525	23114502	TRANSISTOR, RN1401
Q526	23114502	TRANSISTOR, RN1401
Q527	23205054	TRANSISTOR, KTA1504Y
Q528	23205054	TRANSISTOR, KTA1504Y
Q529	23205054	TRANSISTOR, KTA1504Y
Q601	23000269	IC, TA8216H
Q601B	70391356	SCREW, BITTB3X10 SZN
Q612	23205054	TRANSISTOR, KTA1504Y
Q661	70114396	TRANSISTOR, 2SC3326B
Q662	70114396	TRANSISTOR, 2SC3326B
Q663	23906597	IC, BA4558F
Q664	23114493	TRANSISTOR, RN2404
Q681	70114396	TRANSISTOR, 2SC3326B
Q682	70114396	TRANSISTOR, 2SC3326B
Q683	23205057	TRANSISTOR, KTC3875Y
Q706	23114528	TRANSISTOR, 2SC1740S
Q707	23114437	TRANSISTOR, 2SC752GTM-Y
Q709	23114528	TRANSISTOR, 2SC1740S
Q710	23205123	TRANSISTOR, 2SA933ASQ
Q711	23314909	TRANSISTOR, 2SA1837
Q711B	23712306	SCREW, PP3X.5X6SZN
Q712	23314912	TRANSISTOR, 2SC4793
Q712B	23712306	SCREW, PP3X.5X6SZN
Q719	23114528	TRANSISTOR, 2SC1740S
Q720	23114528	TRANSISTOR, 2SC1740S
Q751	23905094	IC, STK392-110
Q752	23905094	IC, STK392-110
Q755	23906689	IC, PQ05RR11
Q760	23205123	TRANSISTOR, 2SA933ASQ
Q761	23314909	TRANSISTOR, 2SA1837
Q761B	23712306	SCREW, PP3X.5X6SZN
Q764	23319720	IC, TC74HC14AF
Q765	23205057	TRANSISTOR, KTC3875Y
Q766	23205057	TRANSISTOR, KTC3875Y

Location No.	Parts No.	Description
Q767	23904442	IC, TC74HC4066AF
Q769	23114528	TRANSISTOR, 2SC1740S
Q771	23319267	IC, AN79M12F
Q771	23319267	IC, AN79M12F
Q771B	23712306	SCREW, PP3X.5X6SZN
Q772	23205054	TRANSISTOR, KTA1504Y
Q776	23205057	TRANSISTOR, KTC3875Y
Q777	23205054	TRANSISTOR, KTA1504Y
Q778	23205057	TRANSISTOR, KTC3875Y
Q779	23114528	TRANSISTOR, 2SC1740S
Q779	23205057	TRANSISTOR, KTC3875Y
Q780	23205054	TRANSISTOR, KTA1504Y
Q781	23114528	TRANSISTOR, 2SC1740S
Q781	23205057	TRANSISTOR, KTC3875Y
Q782	23318840	IC, AN79M05F
Q782	23205123	TRANSISTOR, 2SA933ASQ
Q783	23114528	TRANSISTOR, 2SC1740S
Q783	23205037	TRANSISTOR, 2SJ512 -250V,-5A,30W
Q784	23314909	TRANSISTOR, 2SA1837
Q784B	23712306	SCREW, PP3X.5X6SZN
Q785	23314912	TRANSISTOR, 2SC4793
Q785B	23712306	SCREW, PP3X.5X6SZN
Q792	23906429	IC, TC74HC123AF
Q793	23205031	TRANSISTOR, FET, 2SK2920
Q796	23205057	TRANSISTOR, KTC3875Y
Q797	23906164	IC, TA75S393F
Q798	23318537	IC, TC4S66F
Q799	23318537	IC, TC4S66F
Q801	23135013	IC, STR-Z4317
Q830	23000804	IC, +9V 2% REG. TO220
Q831	23319941	IC, SI-3050C
Q832	23000805	IC, SI-3033CA(LF1101)
Q840	23906133	IC, MIP280
Q841	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q842	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q843	23314965	TRANSISTOR, KTC3198 Y
Q862	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q881	23319693	IC, SE116N, LF4
Q901	23314971	TRANSISTOR, 2SC5360(FA)
Q902	23114433	TRANSISTOR, 2SC1815-Y
Q911	23314971	TRANSISTOR, 2SC5360(FA)
Q912	23114433	TRANSISTOR, 2SC1815-Y
Q913	23114735	TRANSISTOR, 2SA102-Y(C)
Q914	23114433	TRANSISTOR, 2SC1815-Y
Q915	23114433	TRANSISTOR, 2SC1815-Y
Q916	23114433	TRANSISTOR, 2SC1815-Y
Q917	23114433	TRANSISTOR, 2SC1815-Y
Q918	23114433	TRANSISTOR, 2SC1815-Y
Q919	23114433	TRANSISTOR, 2SC1815-Y
Q920	23114433	TRANSISTOR, 2SC1815-Y
Q921	23314971	TRANSISTOR, 2SC5360(FA)
Q922	23114433	TRANSISTOR, 2SC1815-Y
Q961	23114433	TRANSISTOR, 2SC1815-Y
Q962	23114735	TRANSISTOR, 2SA102-Y(C)
Q963	23114433	TRANSISTOR, 2SC1815-Y
Q964	23114425	TRANSISTOR, 2SA1015-Y(TE
Q965	23114433	TRANSISTOR, 2SC1815-Y
Q966	23114425	TRANSISTOR, 2SA1015-Y(TE
Q968	23114433	TRANSISTOR, 2SC1815-Y
Q971	23114425	TRANSISTOR, 2SA1015-Y(TE
Q972	23114425	TRANSISTOR, 2SA1015-Y(TE
Q973	23114735	TRANSISTOR, 2SA102-Y(C)
Q974	23114433	TRANSISTOR, 2SC1815-Y
Q975	23114437	TRANSISTOR, 2SC752GTM-Y
QA01	23009229	IC, MCU 1CHIP 16BIT 4M 64

Location No.	Parts No.	Description
QA02	23906642	IC, AT24C64-10PC
QA70	23319935	IC, MM1096BS
QA71	23205057	TRANSISTOR, KTC3875Y
QA72	23205057	TRANSISTOR, KTC3875Y
QA80	23906295	IC, UPC29M33HB
QA81	70200563	IC, RESET VS=2.9V, PST9129
QB01	23114528	TRANSISTOR, 2SC1740S
QB03	23114498	TRANSISTOR, RN1405
QB05	23205057	TRANSISTOR, KTC3875Y
QB14	23205057	TRANSISTOR, KTC3875Y
QB15	23205057	TRANSISTOR, KTC3875Y
QB30	23314965	TRANSISTOR, KTC3198 Y
QB55	23205057	TRANSISTOR, KTC3875Y
QB61	70114402	TRANSISTOR, 2SC3437-Y
QB81	70114396	TRANSISTOR, 2SC3326B
QB82	70114396	TRANSISTOR, 2SC3326B
QB83	23205054	TRANSISTOR, KTA1504Y
QB84	23205057	TRANSISTOR, KTC3875Y
QB85	23205054	TRANSISTOR, KTA1504Y
QB86	23205054	TRANSISTOR, KTA1504Y
QB87	23205054	TRANSISTOR, KTA1504Y
QB88	23205054	TRANSISTOR, KTA1504Y
QD01	23009142	IC, NJM1136D
QD41	23000189	IC, TA2136N
QH001	23000380	IC, TC190C060AF-301(Z)
QH004	23319595	IC, TC74HC244AF
QH005	23905013	IC, TLC2932IPW
QH006	23906908	IC, MC33078D
QH173	23905666	IC, AT24C1610PC
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR AM-30-24CA
QH305	23906585	IC, QUAD OP-AMP DMP14 14P, NJM2058M
QH306	23906585	IC, QUAD OP-AMP DMP14 14P, NJM2058M
QH307	23906585	IC, QUAD OP-AMP DMP14 14P, NJM2058M
QH308	23906429	IC, TC74HC123AF
QH309	23906429	IC, TC74HC123AF
QH401	23009185	IC, MCU 1CHIP 8BIT 8M 42P
QH402	70119743	IC, PST523D
QH404	23318977	IC, MC14052BF
QH405	23319595	IC, TC74HC244AF
QH406	23205054	TRANSISTOR, KTA1504Y
QH501	23009177	IC, D/A CONVERTER 6CH IN
QH520	23906909	IC, MC33079D
QH540	23906909	IC, MC33079D
QH560	23906909	IC, MC33079D
QR14	23205054	TRANSISTOR, KTA1504Y
QR15	23205054	TRANSISTOR, KTA1504Y
QR16	23205054	TRANSISTOR, KTA1504Y
QS01	23114623	TRANSISTOR, 2SC2878-A(TEM
QS11	23114623	TRANSISTOR, 2SC2878-A(TEM
QS12	23114466	TRANSISTOR, RN2204
QS13	23314965	TRANSISTOR, KTC3198 Y
QS14	23314965	TRANSISTOR, KTC3198 Y
QS107	23904896	IC, JLC1562BF
QS108	23205057	TRANSISTOR, KTC3875Y
QS120	23906597	IC, BA4558F
QV01	23905539	IC, TA8851CN
QV10	23114528	TRANSISTOR, 2SC1740S
QV20	23114460	TRANSISTOR, RN1204

Location No.	Parts No.	Description
QV21	23114528	TRANSISTOR, 2SC1740S
QV22	23205123	TRANSISTOR, 2SA933ASQ
QV23	23205123	TRANSISTOR, 2SA933ASQ
QV28	23114461	TRANSISTOR, RN1203
QV30	23905590	IC, M52055FP
QV31	23205057	TRANSISTOR, KTC3875Y
QV37	23205054	TRANSISTOR, KTA1504Y
QV38	23205054	TRANSISTOR, KTA1504Y
QV39	23205054	TRANSISTOR, KTA1504Y
QV48	23114528	TRANSISTOR, 2SC1740S
QV49	23114528	TRANSISTOR, 2SC1740S
QV61	23205054	TRANSISTOR, KTA1504Y
QW04	23205057	TRANSISTOR, KTC3875Y
QW05	23205057	TRANSISTOR, KTC3875Y
QW08	23205057	TRANSISTOR, KTC3875Y
QW10	23205057	TRANSISTOR, KTC3875Y
QW11	23205057	TRANSISTOR, KTC3875Y
QW17	23114463	TRANSISTOR, RN1201
QY260	23114528	TRANSISTOR, 2SC1740S
D101	23316755	DIODE, ZENER, MTZJ33C
D215	23118041	DIODE, MA111
D216	23118041	DIODE, MA111
D217	23118041	DIODE, MA111
D218	23118041	DIODE, MA111
D219	23118041	DIODE, MA111
D220	23118041	DIODE, MA111
D260	23118094	DIODE, EU2A
D301	23118094	DIODE, EU2A
D302	23316794	DIODE, SC570A
D303	23118822	DIODE, ERB12-02
D304	23118822	DIODE, ERB12-02
D305	23118041	DIODE, MA111
D311	23316682	DIODE, ZENER, MTZJ7.5C
D312	23316732	DIODE, ZENER, MTZJ18C
D313	23118859	DIODE, 1SS133
D314	23118859	DIODE, 1SS133
D315	23118859	DIODE, 1SS133
D401	23118094	DIODE, EU2A
D402	23118094	DIODE, EU2A
D403	23316731	DIODE, ZENER, MTZJ18B
D404	23316254	DIODE, ERC06-15
D405	23118094	DIODE, EU2A
D406	23118094	DIODE, EU2A
D407	23316731	DIODE, ZENER, MTZJ18B
D408	23115910	DIODE, S5295G
D409	23118094	DIODE, EU2A
D411	23118094	DIODE, EU2A
D413	23118707	DIODE, RP-1H
D414	23118707	DIODE, RP-1H
D415	23118859	DIODE, 1SS133
D416	23118094	DIODE, EU2A
D416	23118041	DIODE, MA111
D417	23316591	DIODE, ZENER, MA8100-M
D418	23316591	DIODE, ZENER, MA8100-M
D419	23316571	DIODE, ZENER CHIP VZ5.48-5.76V, MA8056-M
D420	23118041	DIODE, MA111
D461	23224366	DIODE, FMQ-3GU
D461B	70391355	SCREW, 3X8MM
⚠ D482	23115774	DIODE, ZENER, RD6.2E(FA-1)
D520	23316647	DIODE, ZENER, MTZJ2.0B
D521	23118041	DIODE, MA111
D522	23118041	DIODE, MA111
D523	23118041	DIODE, MA111
D530	23316586	DIODE, ZENER, MA8082-H
D531	23316584	DIODE, ZENER CHIP VZ7.77-8.17V, MA8082-L

Location No.	Parts No.	Description
D532	23118822	DIODE, ERB12-02
D533	23316586	DIODE, ZENER, MA8082-H
D534	23316792	DIODE, SC215
D535	23316591	DIODE, ZENER, MA8100-M
D601	23118041	DIODE, MA111
D602	23118041	DIODE, MA111
D603	23118041	DIODE, MA111
D604	23118041	DIODE, MA111
D607	23316616	DIODE, ZENER CHIP 21.45-22.55V, MA8220-M
D608	23316616	DIODE, ZENER CHIP 21.45-22.55V, MA8220-M
D611	23118041	DIODE, MA111
D612	23118041	DIODE, MA111
D613	23118041	DIODE, MA111
D614	23118041	DIODE, MA111
D615	23118041	DIODE, MA111
D616	23118041	DIODE, MA111
D661	23316580	DIODE, ZENER CHIP VZ7.29-7.67V, MA8075-M
D704	23118859	DIODE, 1SS133
D705	23118859	DIODE, 1SS133
D715	23118859	DIODE, 1SS133
D721	23118859	DIODE, 1SS133
D761	23118859	DIODE, 1SS133
D762	23118859	DIODE, 1SS133
D763	23118859	DIODE, 1SS133
D764	23118859	DIODE, 1SS133
D781	23118859	DIODE, 1SS133
D782	23118859	DIODE, 1SS133
D783	23118859	DIODE, 1SS133
D784	23118859	DIODE, 1SS133
D801	23316784	DIODE, RBV1506, LF-A
D840	23357207	DIODE, LN1WBA60
D841	23118528	DIODE, ZENER, RD5.6ESA B3
D842	23118536	DIODE, ZENER, RD4.7ES B1
D843	23118094	DIODE, EU2A
D845	23118859	DIODE, 1SS133
D846	23118633	DIODE, ZENER, RD3.0ES B2
D847	23118633	DIODE, ZENER, RD3.0ES B2
D848	23118859	DIODE, 1SS133
D851	23357215	DIODE, D4SBS6
D852	23316714	DIODE, RL2Z
D853	23316714	DIODE, RL2Z
D854	23316399	DIODE, EL1Z
D855	23316399	DIODE, EL1Z
D862	23118094	DIODE, EU2A
D864	23118094	DIODE, EU2A
D873	23118622	DIODE, ZENER, RD10ES B2
D875	23118623	DIODE, ZENER, RD10ES B1
D876	23118603	DIODE, ZENER VZ33.40-35.13 DO-34RD36ESA B3
D879	23118615	DIODE, ZENER, RD27ES B3
D881	23118859	DIODE, 1SS133
D882	23357012	DIODE, 1SS244
D883	23118859	DIODE, 1SS133
D884	23357217	DIODE, D4SBL40
D885	23357216	DIODE, D4SBL20U
D890	23316661	DIODE, ZENER, MTZJ3.9B
D891	23357214	DIODE, D4SBS4
D892	23316768	DIODE, FMB-26L
D899	24019485	VARISTOR, TNR10V431K
D901	23118859	DIODE, 1SS133
D902	23118859	DIODE, 1SS133
D911	23118859	DIODE, 1SS133
D912	23118859	DIODE, 1SS133
D916	23115337	DIODE, 1S1834
D921	23118859	DIODE, 1SS133

Location No.	Parts No.	Description
D922	23118859	DIODE, 1SS133
D924	23118859	DIODE, 1SS133
D925	23118859	DIODE, 1SS133
D931	23118859	DIODE, 1SS133
D932	23118859	DIODE, 1SS133
D933	23118859	DIODE, 1SS133
D934	23118859	DIODE, 1SS133
D936	23115337	DIODE, 1S1834
D941	23118859	DIODE, 1SS133
D942	23118859	DIODE, 1SS133
D943	23118859	DIODE, 1SS133
D946	23118859	DIODE, 1SS133
D948	23118859	DIODE, 1SS133
D962	23118859	DIODE, 1SS133
D963	23118859	DIODE, 1SS133
D964	23118859	DIODE, 1SS133
D965	23118859	DIODE, 1SS133
D966	23118859	DIODE, 1SS133
D967	23115337	DIODE, 1S1834
D7705	23118041	DIODE, MA111
D7706	23118041	DIODE, MA111
D7707	23118041	DIODE, MA111
D7708	23118041	DIODE, MA111
D7709	23118538	DIODE, ZENER, RD6.2ESA B2
D7715	23118041	DIODE, MA111
D7716	23118041	DIODE, MA111
D7717	23118538	DIODE, ZENER, RD6.2ESA B2
D7718	23118538	DIODE, ZENER, RD6.2ESA B2
D7719	23118538	DIODE, ZENER, RD6.2ESA B2
D7733	23118275	DIODE, ZENER, RD18MB2
D7734	23118275	DIODE, ZENER, RD18MB2
D7736	23118538	DIODE, ZENER, RD6.2ESA B2
D7738	23118041	DIODE, MA111
D7739	23118041	DIODE, MA111
D7740	23118041	DIODE, MA111
D7741	23118041	DIODE, MA111
D7742	23118041	DIODE, MA111
D7743	23118041	DIODE, MA111
D7745	23118041	DIODE, MA111
D7746	23118041	DIODE, MA111
D7747	23118041	DIODE, MA111
D7748	23118041	DIODE, MA111
D7749	23118041	DIODE, MA111
D7760	23118041	DIODE, MA111
D7806	23118041	DIODE, MA111
D7807	23316402	DIODE, RL4Z
D7808	23316766	DIODE, RU2YX
DA02	23316574	DIODE, ZENER CHIP VZ6.05-6.36V, MA8062-M
DA23	23118041	DIODE, MA111
DA43	23118041	DIODE, MA111
DA44	23118041	DIODE, MA111
DA45	23118041	DIODE, MA111
DA46	23118041	DIODE, MA111
DA70	23118041	DIODE, MA111
DB01	23358564	DIODE, LED, SLR-56VC3FPQ
DB03	23358522	DIODE, LED, SIR-56SB3F
DB30	23118041	DIODE, MA111
DB31	23118041	DIODE, MA111
DB61	23118041	DIODE, MA111
DH001	23316675	DIODE, ZENER, MTZJ6.2B
DH002	23316675	DIODE, ZENER, MTZJ6.2B
DH003	23316675	DIODE, ZENER, MTZJ6.2B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B

Location No.	Parts No.	Description
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH302	23316672	DIODE, ZENER, MTZJ5.6B
DH303	23316672	DIODE, ZENER, MTZJ5.6B
DH304	23316672	DIODE, ZENER, MTZJ5.6B
DH305	23316672	DIODE, ZENER, MTZJ5.6B
DH306	23316672	DIODE, ZENER, MTZJ5.6B
DH307	23316672	DIODE, ZENER, MTZJ5.6B
DH308	23316672	DIODE, ZENER, MTZJ5.6B
DH309	23118859	DIODE, 1SS133
DH310	23118859	DIODE, 1SS133
DH311	23118859	DIODE, 1SS133
DH312	23118859	DIODE, 1SS133
DH313	23316666	DIODE, ZENER, MTZJ4.7B
DH314	23316666	DIODE, ZENER, MTZJ4.7B
DH315	23316666	DIODE, ZENER, MTZJ4.7B
DH316	23316666	DIODE, ZENER, MTZJ4.7B
DH401	23316574	DIODE, ZENER CHIP VZ6.05-6.36V, MA8062-M
DR10	23118041	DIODE, MA111
DR11	23118041	DIODE, MA111
DR12	23118041	DIODE, MA111
DR13	23118041	DIODE, MA111
DR14	23118041	DIODE, MA111
DR15	23118041	DIODE, MA111
DS120	23316740	DIODE, ZENER VZ21.52-22.63 DO34 MTZ J 22D
DV01	23316686	DIODE, ZENER, MTZJ9.1A
DV02	23316686	DIODE, ZENER, MTZJ9.1A
DV03	23316686	DIODE, ZENER, MTZJ9.1A
DV07	23316686	DIODE, ZENER, MTZJ9.1A
DV08	23316686	DIODE, ZENER, MTZJ9.1A
DV09	23316686	DIODE, ZENER, MTZJ9.1A
DV11	23316686	DIODE, ZENER, MTZJ9.1A
DV12	23316686	DIODE, ZENER, MTZJ9.1A
DV13	23316686	DIODE, ZENER, MTZJ9.1A
DV17	23316686	DIODE, ZENER, MTZJ9.1A
DV18	23316686	DIODE, ZENER, MTZJ9.1A
DV25	23118859	DIODE, 1SS133
DV30	23316792	DIODE, SC215
DV31	23316672	DIODE, ZENER, MTZJ5.6B
DV39	23358543	PHOTO SENSOR, IF=10MA 650NM S7565
DV161	23316591	DIODE, ZENER, MA8100-M
DV162	23316591	DIODE, ZENER, MA8100-M
DV163	23316591	DIODE, ZENER, MA8100-M
DV164	23316591	DIODE, ZENER, MA8100-M
DV165	23316591	DIODE, ZENER, MA8100-M
DV166	23316591	DIODE, ZENER, MA8100-M
MISCELLANEOUS		
B224	23035412	SCREW, BTB4X12SZN
B230	23037312	SCREW, BTBW3X12SZN
B233	23035412	SCREW, BTB4X12SZN
B234	23035412	SCREW, BTB4X12SZN
B235	23035310	SCREW, BTB3X10SZN
B236	23035412	SCREW, BTB4X12SZN
BB10	23713014	CONNECTOR, BRIDGE PLUG 16P 1.5
BB11	23713013	BASE SOCKET 16P 1.5
BB20	23713014	CONNECTOR, BRIDGE PLUG 16P 1.5
BB21	23713013	BASE SOCKET 16P 1.5
BB30	23903022	CONNECTOR, BASE B-B 8P 2.5 JST
BB300	23368627	CONNECTOR, BRIDGE B-B 8P 2.5JST 08TM-2.5FJ-E
BB31	23903022	CONNECTOR, BASE B-B 8P 2.5 JST
E913	23198540	CRT EARTH ASSY, TP48E60
E943	23198540	CRT EARTH ASSY, TP48E60

Location No.	Parts No.	Description
E973	23198540	CRT EARTH ASSY, TP48E60
F470	23144624	FUSE, AXIAL 125V 2.0A
F801	23144481	FUSE, 125V 7.0A
F801A	23165433	FUSE HOLDER, 5.2 SOC
F840	23144581	FUSE, AXIAL, 125V 200MA
F850	23144627	FUSE, AXIAL 125V 5.0A
F851	23144627	FUSE, AXIAL 125V 5.0A
F852	23144624	FUSE, AXIAL 125V 2.0A
F853	23144622	FUSE, AXIAL 125V 1.25A
F860	23144456	FUSE, AXIAL, 125V 5.0A
F889	23144626	FUSE, AXIAL 125V 4.0A
F890	23144625	FUSE, AXIAL 125V 3.15A
F891	23144627	FUSE, AXIAL 125V 5.0A
G101	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
G102	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
GJ01	24000445	CHIP JUMPER, 1608TYPE
GJ01	24000445	CHIP JUMPER, 1608TYPE
GJ02	24000445	CHIP JUMPER, 1608TYPE
GJ03	24000445	CHIP JUMPER, 1608TYPE
GJ05	24000445	CHIP JUMPER, 1608TYPE
GJ05	24000445	CHIP JUMPER, 1608TYPE
GJ06	24000445	CHIP JUMPER, 1608TYPE
GJ07	24000824	CHIP JUMPER, 2125TYPE
GJ11	24000445	CHIP JUMPER, 1608TYPE
GJ14	24000445	CHIP JUMPER, 1608TYPE
GJ14	24000445	CHIP JUMPER, 1608TYPE
GJ15	24000445	CHIP JUMPER, 1608TYPE
GJ15	24000445	CHIP JUMPER, 1608TYPE
GJ16	24000445	CHIP JUMPER, 1608TYPE
GJ17	24000445	CHIP JUMPER, 1608TYPE
GJ18	24000445	CHIP JUMPER, 1608TYPE
GJ19	24000445	CHIP JUMPER, 1608TYPE
GJ20	24000445	CHIP JUMPER, 1608TYPE
GJ207	24000445	CHIP JUMPER, 1608TYPE
GJ208	24000445	CHIP JUMPER, 1608TYPE
GJ209	24000445	CHIP JUMPER, 1608TYPE
GJ21	24000445	CHIP JUMPER, 1608TYPE
GJ210	24000445	CHIP JUMPER, 1608TYPE
GJ211	24000445	CHIP JUMPER, 1608TYPE
GJ212	24000445	CHIP JUMPER, 1608TYPE
GJ30	24000445	CHIP JUMPER, 1608TYPE
GJ33	24000445	CHIP JUMPER, 1608TYPE
GJ40	24000445	CHIP JUMPER, 1608TYPE
GJ41	24000445	CHIP JUMPER, 1608TYPE
GJ61	24000445	CHIP JUMPER, 1608TYPE
GJ62	24000445	CHIP JUMPER, 1608TYPE
GJ63	23103237	CHIP BEAD INDUCTOR 102OHM
GJ64	24000445	CHIP JUMPER, 1608TYPE
GJ65	24000445	CHIP JUMPER, 1608TYPE
GJ66	23103237	CHIP BEAD INDUCTOR 102OHM
GJ663	24000445	CHIP JUMPER, 1608TYPE
GJ665	24000445	CHIP JUMPER, 1608TYPE
GJ67	24000445	CHIP JUMPER, 1608TYPE
GJ68	24000445	CHIP JUMPER, 1608TYPE
GJ69	23103237	CHIP BEAD INDUCTOR 102OHM
GJ71	24000445	CHIP JUMPER, 1608TYPE
GJ72	24000445	CHIP JUMPER, 1608TYPE
GJ73	23103237	CHIP BEAD INDUCTOR 102OHM
GJ74	24000445	CHIP JUMPER, 1608TYPE
GJ75	24000445	CHIP JUMPER, 1608TYPE
GJ76	23103237	CHIP BEAD INDUCTOR 102OHM
GJ77	24000445	CHIP JUMPER, 1608TYPE
GJ77	24000445	CHIP JUMPER, 1608TYPE
GJ78	24000445	CHIP JUMPER, 1608TYPE
GJ79	23103237	CHIP BEAD INDUCTOR 102OHM

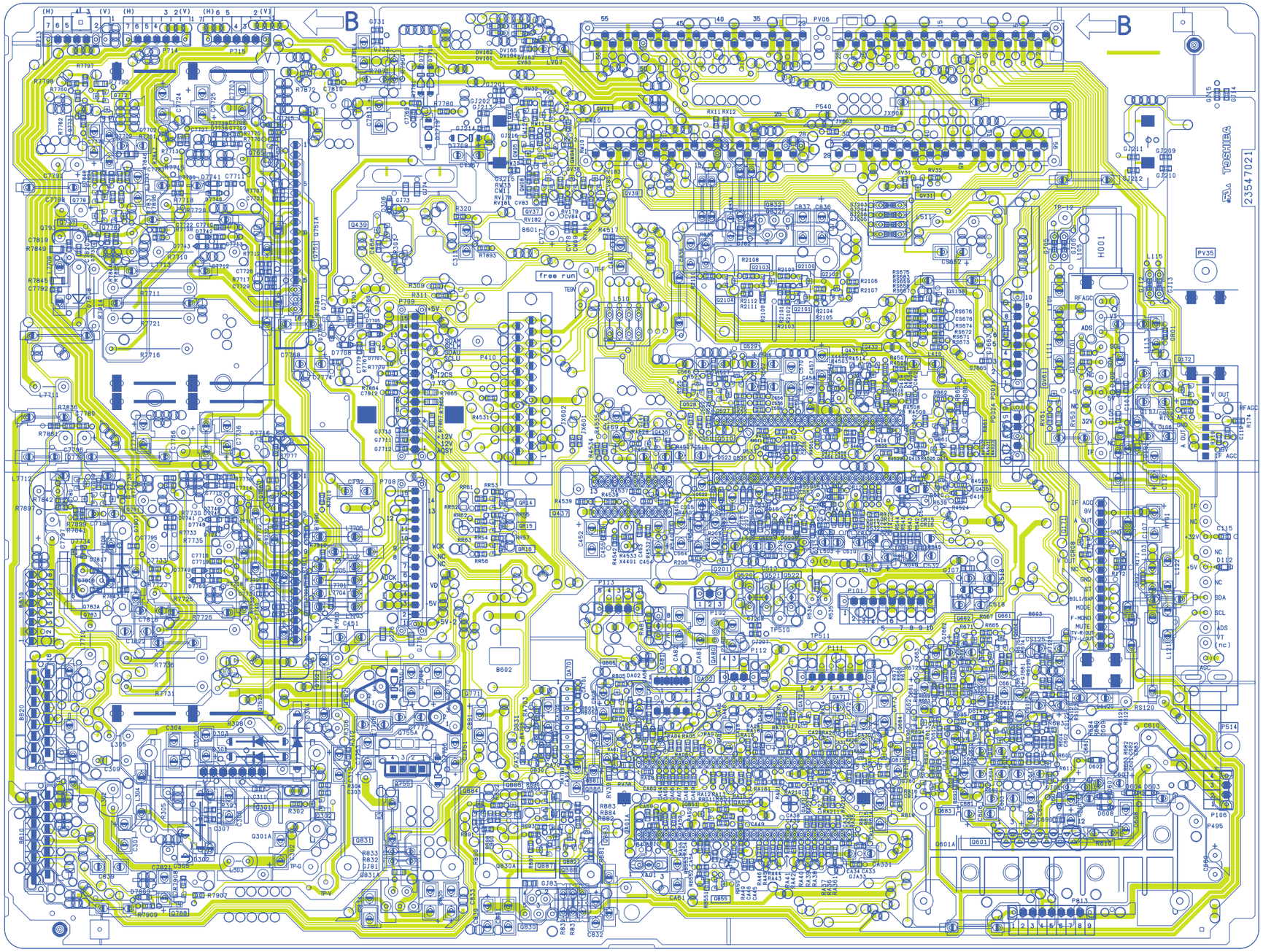
Location No.	Parts No.	Description
GJ80	24000445	CHIP JUMPER, 1608TYPE
GJ81	24000824	CHIP JUMPER, 2125TYPE
GJ82	24000824	CHIP JUMPER, 2125TYPE
GJ83	24000824	CHIP JUMPER, 2125TYPE
GJA33	24000445	CHIP JUMPER, 1608TYPE
GR99	24000445	CHIP JUMPER, 1608TYPE
H003	23124087	ANTENNA SWITCH, BUNPAI
H003A	23740989	NUT, F-CONNECTOR
JX601	24000445	CHIP JUMPER, 1608TYPE
JX602	24000445	CHIP JUMPER, 1608TYPE
KB01	23000852	IC, REMOCON RECEIVER, PIC-37043TE2
P350	23368634	CONNECTOR, PLUG, B-B 1.5MM 25P, JDV-PS25LB-10-1
P410	23903025	CONNECTOR, SOCKET, B-B 1.5MM 25P JDV-R25LB-10-1
P540	23903040	SOCKET, B-B 2MM 56P TAIKO
P708	23902655	CONNECTOR, 15P
P709	23902655	CONNECTOR, 15P
P713	23164787	CONNECTOR, PLUG, 7P
P714	23164787	CONNECTOR, PLUG, 7P
P715	23164787	CONNECTOR, PLUG, 7P
P801	23372184	POWER CORD, U/C FL 125V7A
P802	23368013	CONNECTOR, PLUG, 2P 11.88MM W VT-JST
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
PB13A	23367677	PLUG, 4P
PH001	23367724	CONNECTOR, PLUG, B-B 15P
PH002	23367724	CONNECTOR, PLUG, B-B 15P
PV02	23365819	JACK, 1S3P
PV04	23365907	PIN(3E+1L:OFF+1R:OFF), JACK 5P
PV05	23368646	PLUG, B-B 2MM 56P TAIKO
PV06	23903040	SOCKET, B-B 2MM 56P TAIKO
S602	23145412	SWITCH, 2C2P, SLIDE
SA01	23145226	SWITCH, 1C1P, PUSH
SA02	23145226	SWITCH, 1C1P, PUSH
SA03	23145226	SWITCH, 1C1P, PUSH
SA04	23145226	SWITCH, 1C1P, PUSH
SA05	23145226	SWITCH, 1C1P, PUSH
SA06	23145226	SWITCH, 1C1P, PUSH
SA07	23145226	SWITCH, 1C1P, PUSH
SA08	23145226	SWITCH, 1C1P, PUSH
SA09	23145226	SWITCH, 1C1P, PUSH
SR81	23146577	RELAY, DLS5D1-O(M)0.25W
UZ01	23148024	SCAN CONVERTER MODUL, N.H
⚠ V901A	23903148	SOCKET, ISH-44S-E ICE #5
⚠ V902A	23903148	SOCKET, ISH-44S-E ICE #5
⚠ V903A	23903148	SOCKET, ISH-44S-E ICE #5
W661	23151232	SPEAKER, SPK-1235, 160X160, 65HZ, 8 OHM
W662	23151232	SPEAKER, SPK-1235, 160X160, 65HZ, 8 OHM
X4401	23153721	CERAMIC RESONATOR, 503KHZ
X4402	23153721	CERAMIC RESONATOR, 503KHZ
XA01	23153533	CERAMIC RESONATOR, CERA RESO, TCR1082AM
XH401	23153752	CRYSTAL, 8.000 40PPM 50OHM
⚠ Z401	24083013	COMPOSITE PARTS, CR-BLOCK, TPA5010AH
Z405	23140203	SPARK GAP, 2.0-3.0KV C-010, AG20PC152F-L3N
Z410	23110842	FOCUS PACK, TPA6031
Z410A	23505177	CABLE, FOCUS
Z450A	23501755	ANODE CABLE, 400LD FBT-C
⚠ Z801	23148734	MODULE, PROTECTOR, HIC1026A
ZH001	23103823	COIL, FILTER, TEM2027D
ZH002	23103823	COIL, FILTER, TEM2027D

Location No.	Parts No.	Description
ZH04	23103778	FILTER, FERRITE CORE, TFE1008
ZH05	23103840	FERRITE CORE, TFE1013
ZH121	23103823	COIL, FILTER, TEM2027D
ZH122	23103823	COIL, FILTER, TEM2027D
ZH141	23103823	COIL, FILTER, TEM2027D
ZH142	23103823	COIL, FILTER, TEM2027D
ZH161	23103823	COIL, FILTER, TEM2027D
ZH162	23103823	COIL, FILTER, TEM2027D
ZH408	23103823	COIL, FILTER, TEM2027D
ZH500	23103823	COIL, FILTER, TEM2027D
ZV60	23103778	FILTER, FERRITE CORE, TFE1008
PC BOARD ASSEMBLIES		
✻ E031Z	23787645	CRT-D/R BOARD, PD0080G1
✻ E032Z	23787646	CRT-D/G BOARD, PD0080G2
✻ E033Z	23787647	CRT-D/B BOARD, PD0080G3
✻ E034Z	23787648	SVM/R BOARD, PD0080G4
✻ E035Z	23787649	SVM/G BOARD, PD0080G5
✻ E036Z	23787650	SVM/B BOARD, PD0080G6
✻ E041Z	23786232	FRONT-CON BOARD, PD0081-1
✻ E042Z	23786233	FRONT-IN BOARD, PD0081-2
✻ E043Z	23786234	REM BOARD, PD0081-3
✻ E044Z	23786235	FRONT-SEN BOARD, PD0081-4
✻ E051Z	23786222	CONV-SEN BOARD, PD0079-1
✻ E052Z	23786223	CONV-SEN2 BOARD, PD0079-2
✻ E053Z	23786224	CONV-SEN3 BOARD, PD0079-3
✻ E054Z	23786225	CONV-SEN4 BOARD, PD0079-4
✻ U401	23787643	DPC BOARD, PD0077C
✻ U801	23787457	DEF/POWER BOARD, PD0640A
✻ U901	23787456	SIGNAL/CONV BOARD, PD0639A (50H82)
✻ U901	23787712	SIGNAL/CONV BOARD, PD0639D (65H82)
✻ UA02	23708379	FRONT BOARD, PD0081
✻ UD01	23787465	SRS-3D 50H BOARD, PD0644A
✻ UH01	23787644	DIGI-CONV BOARD, PD0638C (50H82)
✻ UH01	23787714	DIGI-CONV BOARD, PD0638D (65H82)
✻ UV01	23787642	A/V BOARD, PD0075C
PICTURE TUBE		
⚠ V901R	23086247	CRT CPLG R (50H82)
⚠ V901R	23086393	OTHER BLOCK, COUPLING R (65H82)
⚠ V902G	23086115	CRT CPLG G (50H82)
⚠ V902G	23086394	OTHER BLOCK, COUPLING G (65H82)
⚠ V903B	23086116	CRT CPLG B (50H82)
⚠ V903B	23086395	OTHER BLOCK, COUPLING B (65H82)
TUNER		
H001	23321411	TUNER, TIM 181CH IIC PH SHINSEN, EL967LW
HY01	23321412	TUNER, TIF 181CH IIC PH TDL, EL963L
ACCESSORIES		
K912	23306413	REMOCON HAND UNIT IR, PJTVUSA, CT-90086
Y101	23565646	OWNER'S MANUAL, ENGLISH/FRENCH, 50H82/65H82
CABINET PARTS		
A001	23411539	CABINET, WOOD CABINET SHIP (50H82)
A001	23411711	WOOD CAB SHIP (65H82)
A102	23527171	GRILLE, SPK GRILLE ASSY (50H82)
A102	23527182	GRILLE, SPK GRILLE ASSY (65H82)
A160	23469228	CASTER, TP50H60
A175	23929314	PIECE, CLIP, TZ50V61
A201	23540542	COVER, BEZEL (50H82)
A201	23540678	COVER, BEZEL (65H82)

Location No.	Parts No.	Description
A202	23450360	PANEL, CONTROL PANEL ASSY 50H81 50H81
A213	23427953	DOOR, DOOR PROPER 50H81
A214	23451976	PUSH CATCH, CLICK
A224	23445489	BUTTON, CONTROL BUTTON 50H81
A268	23540543	COVER, FRONT COVER (50H82)
A268	23540754	COVER, FRONT COVER (65H82)
A421	23540170	COVER, REAR BOARD 50A60
A424	23540544	COVER, BACK BOARD (50H82)
A424	23530340	BACK BOARD 65HDX82 (65H82)
A510	23030815	WOOD SCREW PTD #6 X 3/4 TNP LOCAL
A521	23030815	WOOD SCREW PTD #6 X 3/4 TNP LOCAL
A543	72471068	SCREW, 4X12
A543	72471068	SCREW, 4X12
A701	23064536	CARTON, CARTON (50H82)
A701	23064558	CARTON, CARTON (65H82)
A703	23946194	PACKING, TOP PACKING (50H82)
A703	23946215	PACKING, TOP PACKING (65H82)
A708	23946189	PACKING, BOTTOM PACKING (50H82)
A708	23946380	BOTTOM PACKING (65H82)
A721	23943628	PLYETHLENE COVERING 46GM88T (50H82)
K501	23311853	SCREEN, 50KL LENTICULAR SHEET, SCREEN50KL-L (50H82)
K501	23311903	SCREEN, 65KL-L LENTICULAR SHEET, SCREEN65KL-L (65H82)
K502	23311854	SCREEN, 50KL FRESNEL SHEET, SCREEN50KL-F (50H82)
K502	23311904	SCREEN, 65KL FRESNEL SHEET, SCREEN65KL-F (65H82)
K503	23311855	SCREEN PROTECTOR, 50RL TINT0, SCR-PRO50RL (50H82)
K503	23311962	SCREEN, PROTECTOR 65KM, SCR-PRO65KM (65H82)
K601	23405012	MIRROR, 50WL 980/700x540x3 MIRROR50WL (50H82)
K601	23405029	MIRROR, 65WL MIRROR65WL (65H82)

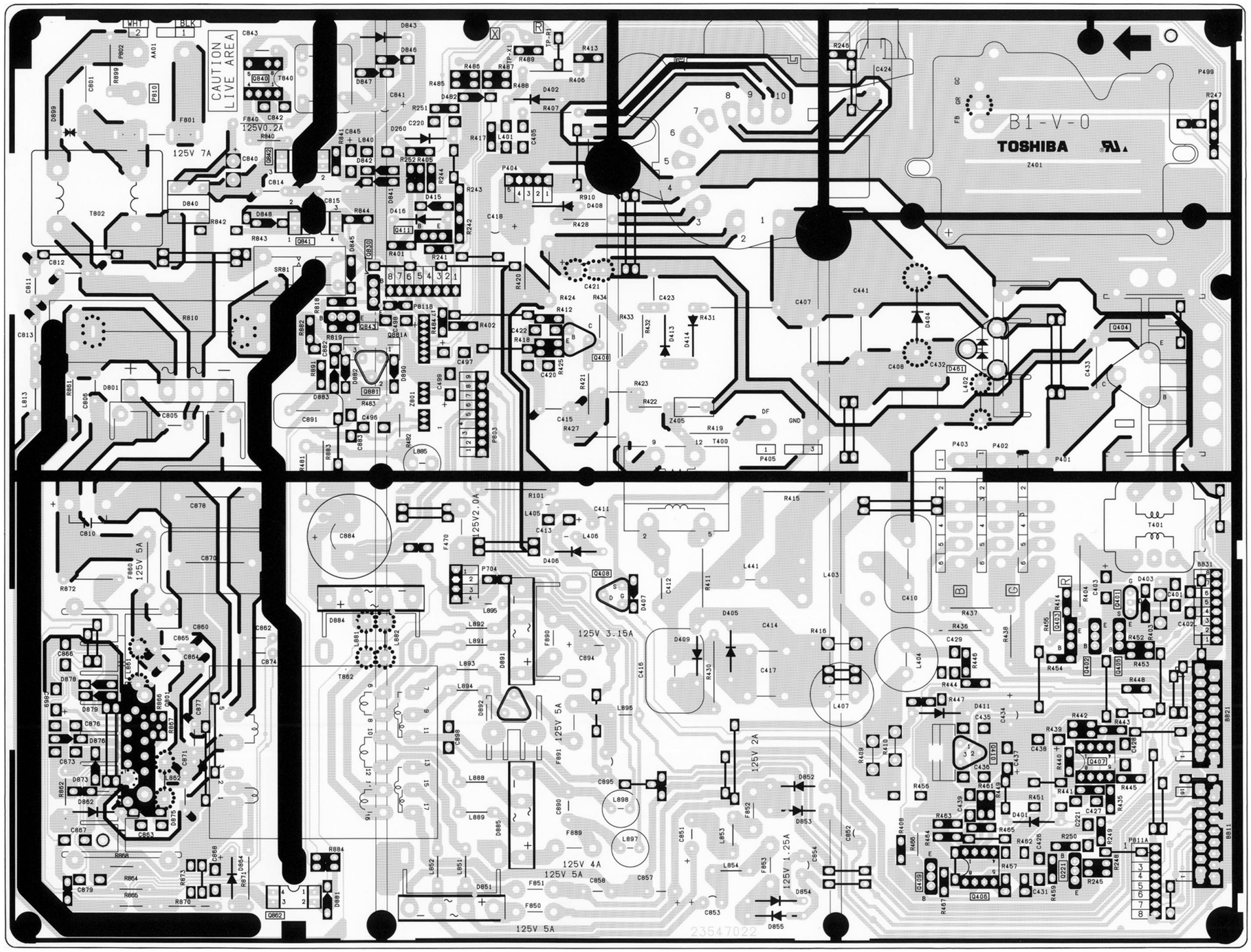
SIGNAL BOARD PD0639A (50H82) (U901)
SIGNAL BOARD PD0639D (65H82) (U901)

BOTTOM (FOIL) SIDE



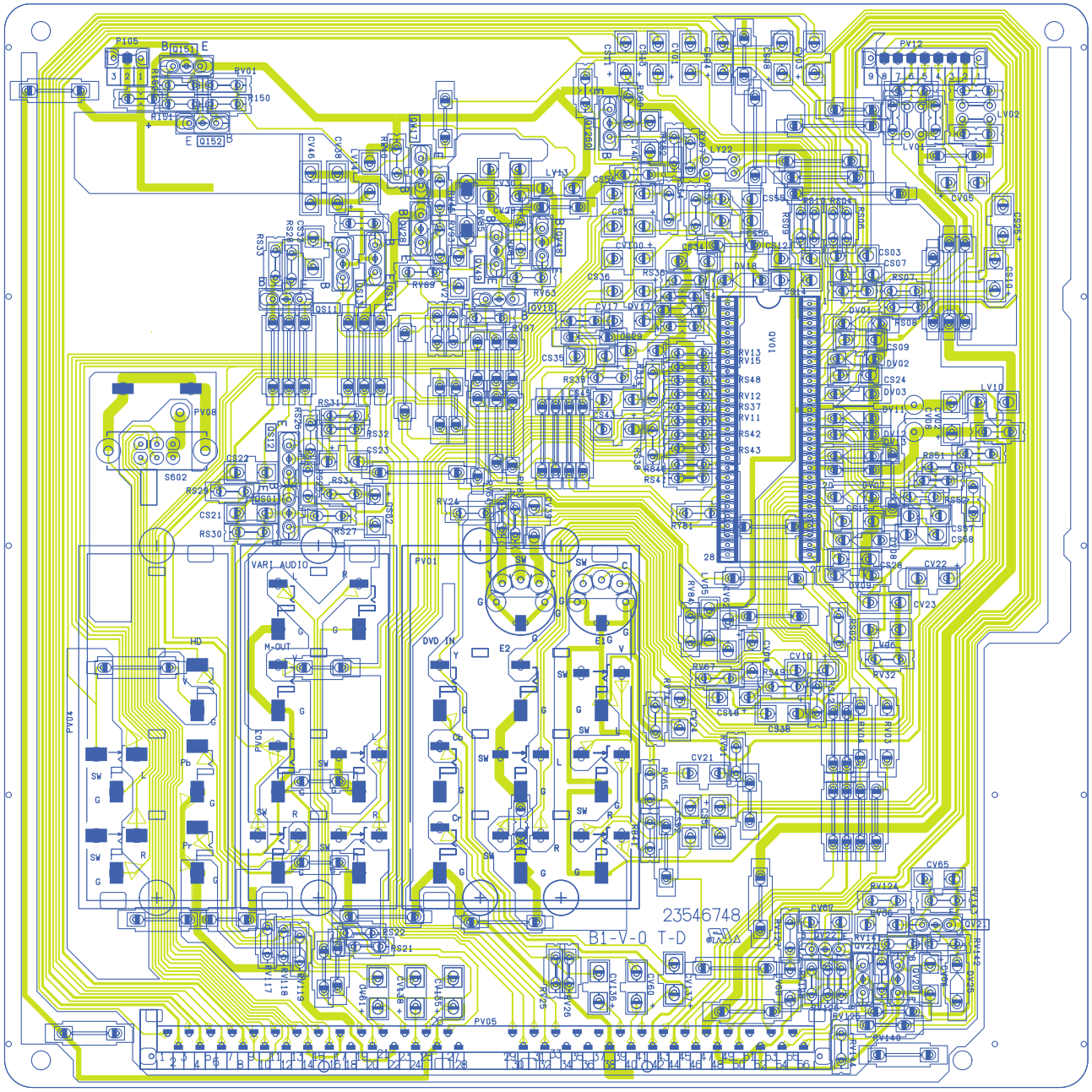
DEF/POWER BOARD PD0640A (U801)

BOTTOM (FOIL) SIDE



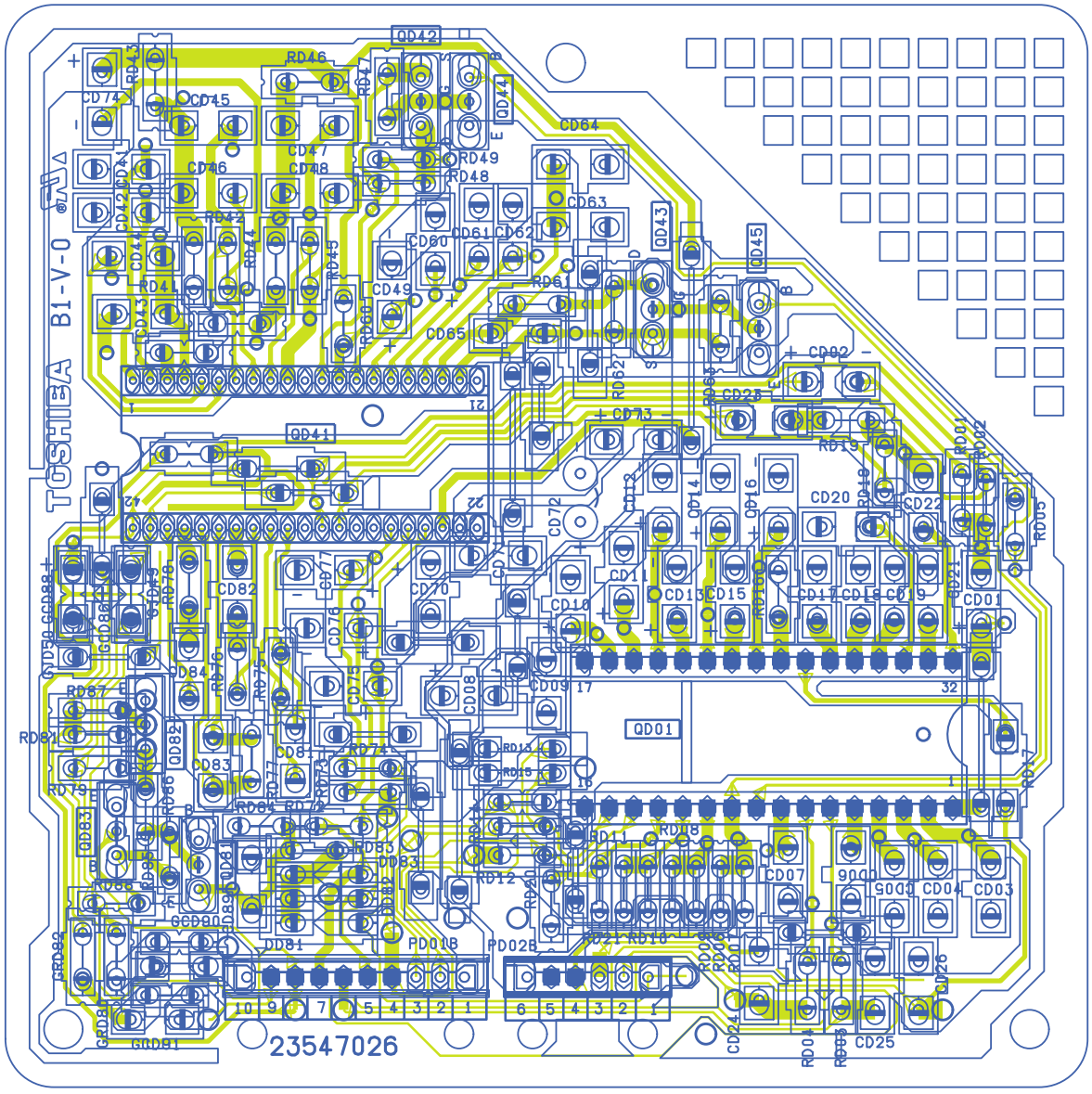
A/V BOARD PD0075C (UV01)

BOTTOM (FOIL) SIDE



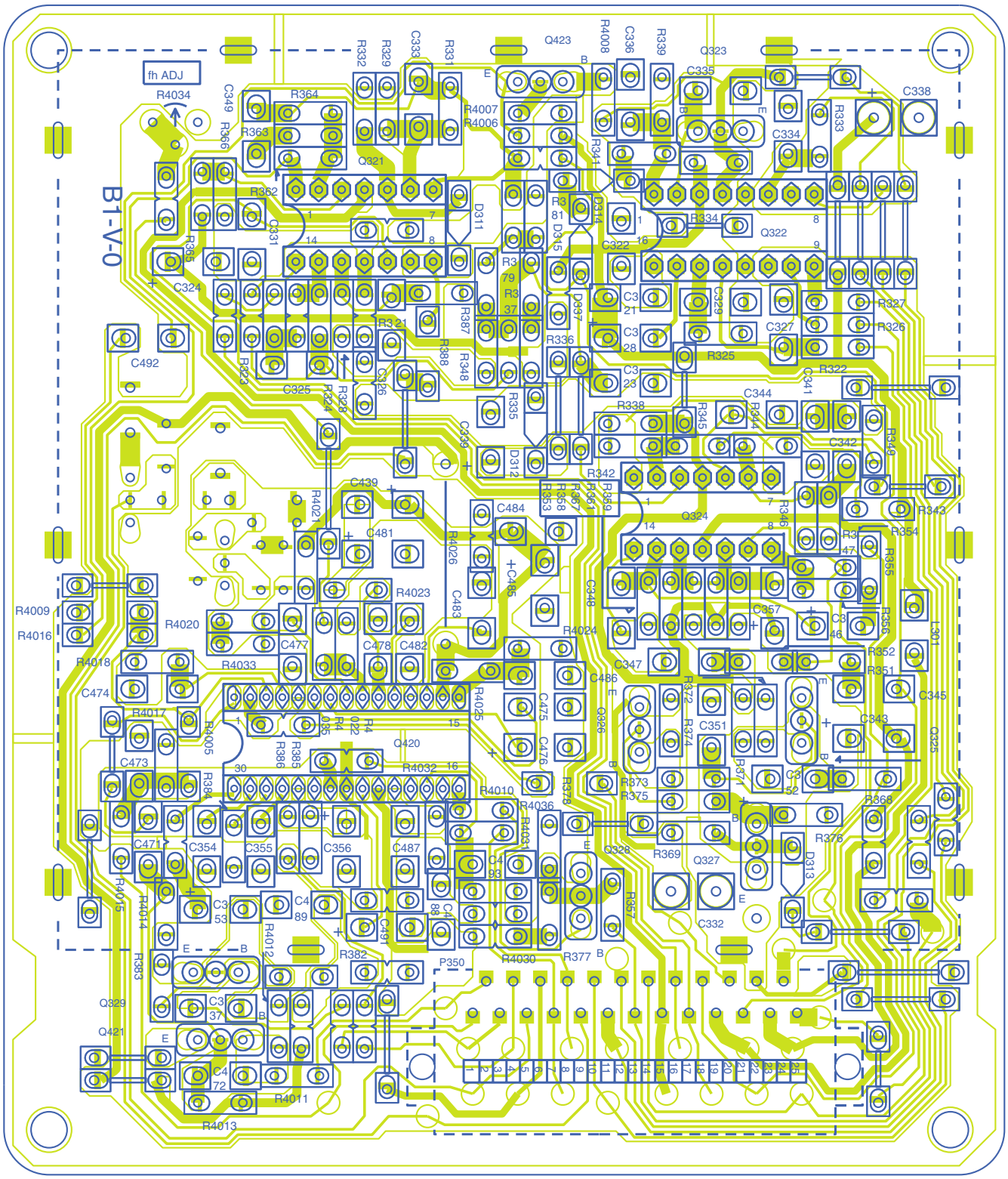
SRS-3D BOARD PD0644A (UD01)

BOTTOM (FOIL) SIDE



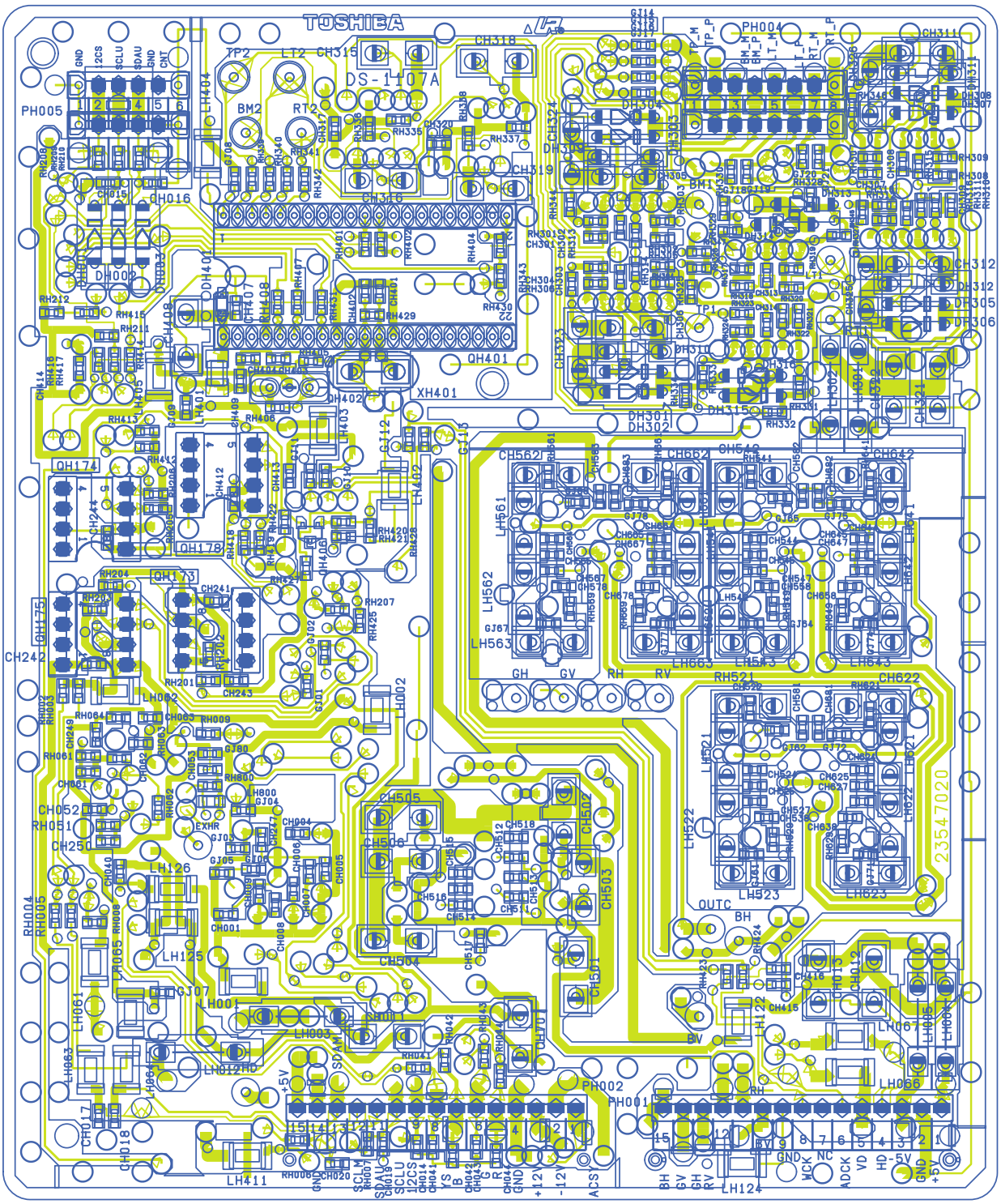
DPC BOARD PD0077C (U401)

BOTTOM (FOIL) SIDE



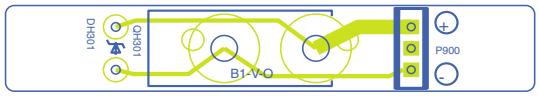
DIGI-CONV BOARD PD0638C (50H82) (UH01)
DIGI-CONV BOARD PD0638D (65H82) (UH01)

BOTTOM (FOIL) SIDE



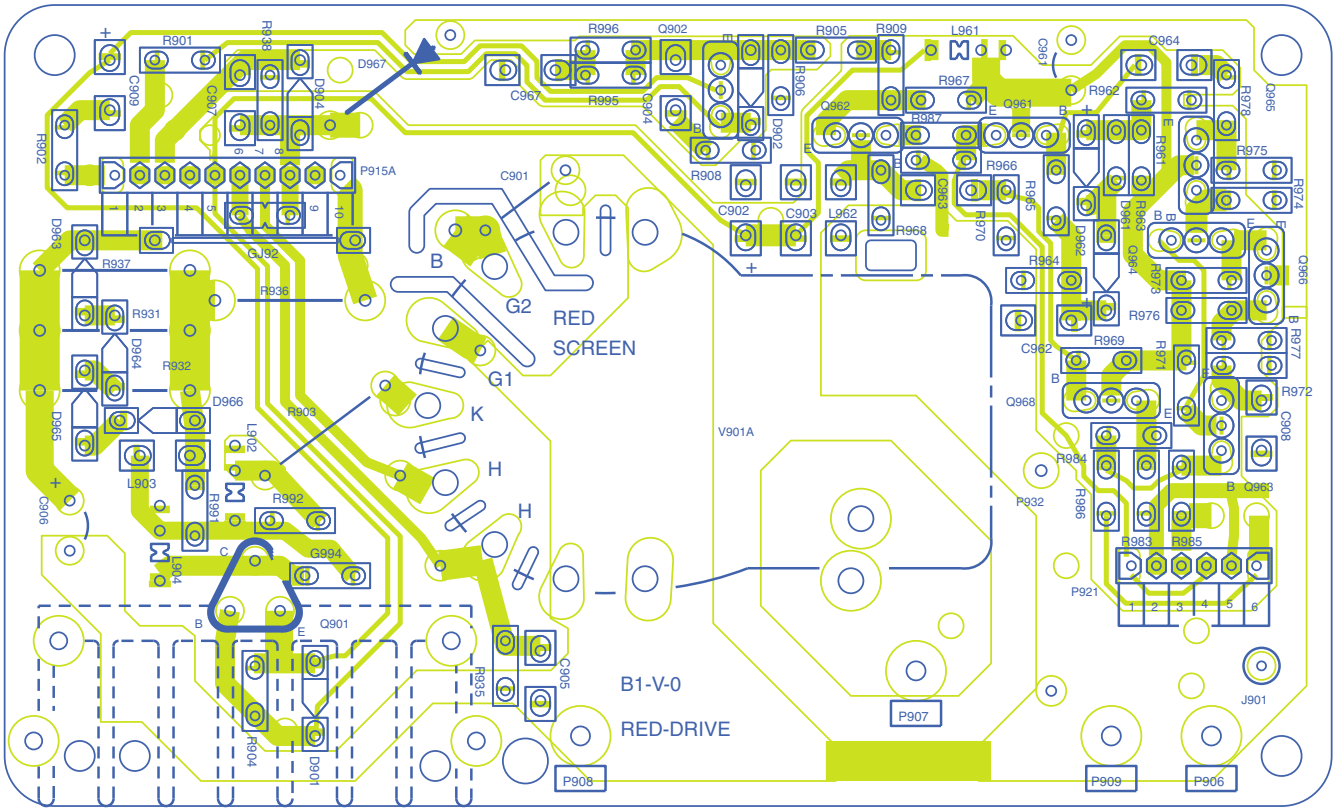
CONV-SEN BOARD PD0079 (UH02) (E051Z -E054Z)

BOTTOM (FOIL) SIDE



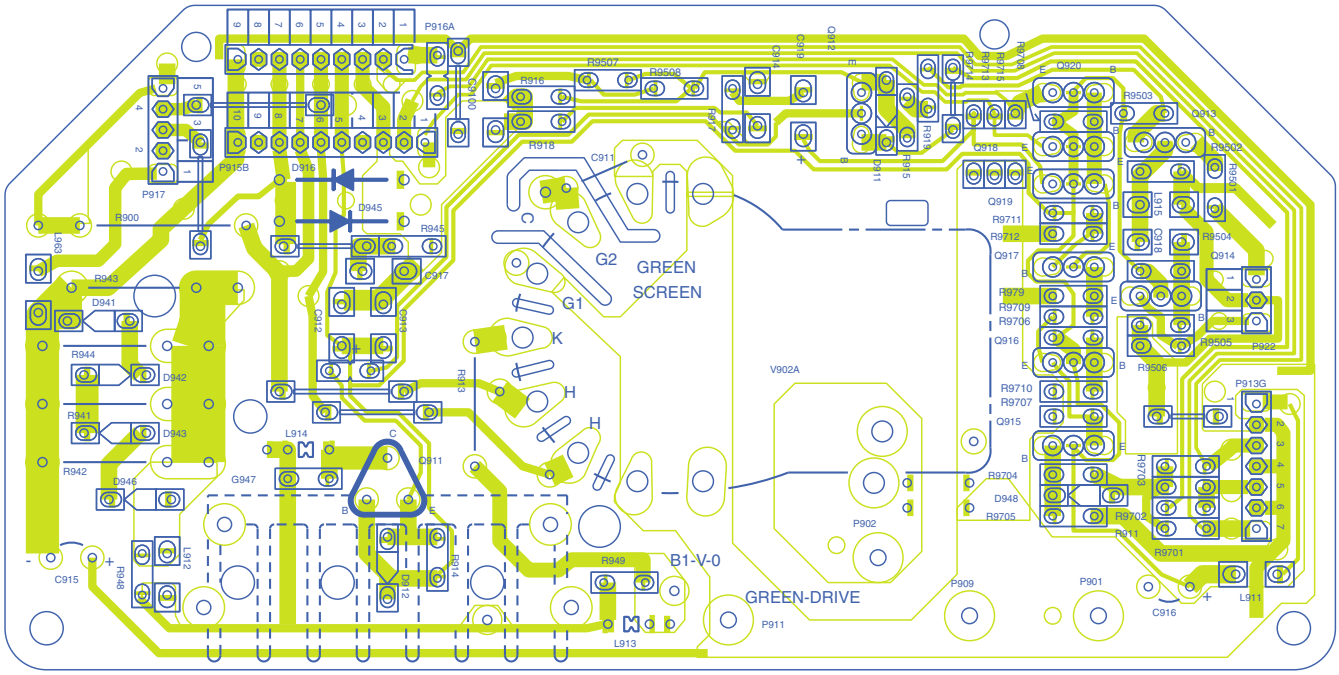
CRT DRIVE(RED) BOARD PD0080G1 (E031Z)

BOTTOM (FOIL) SIDE



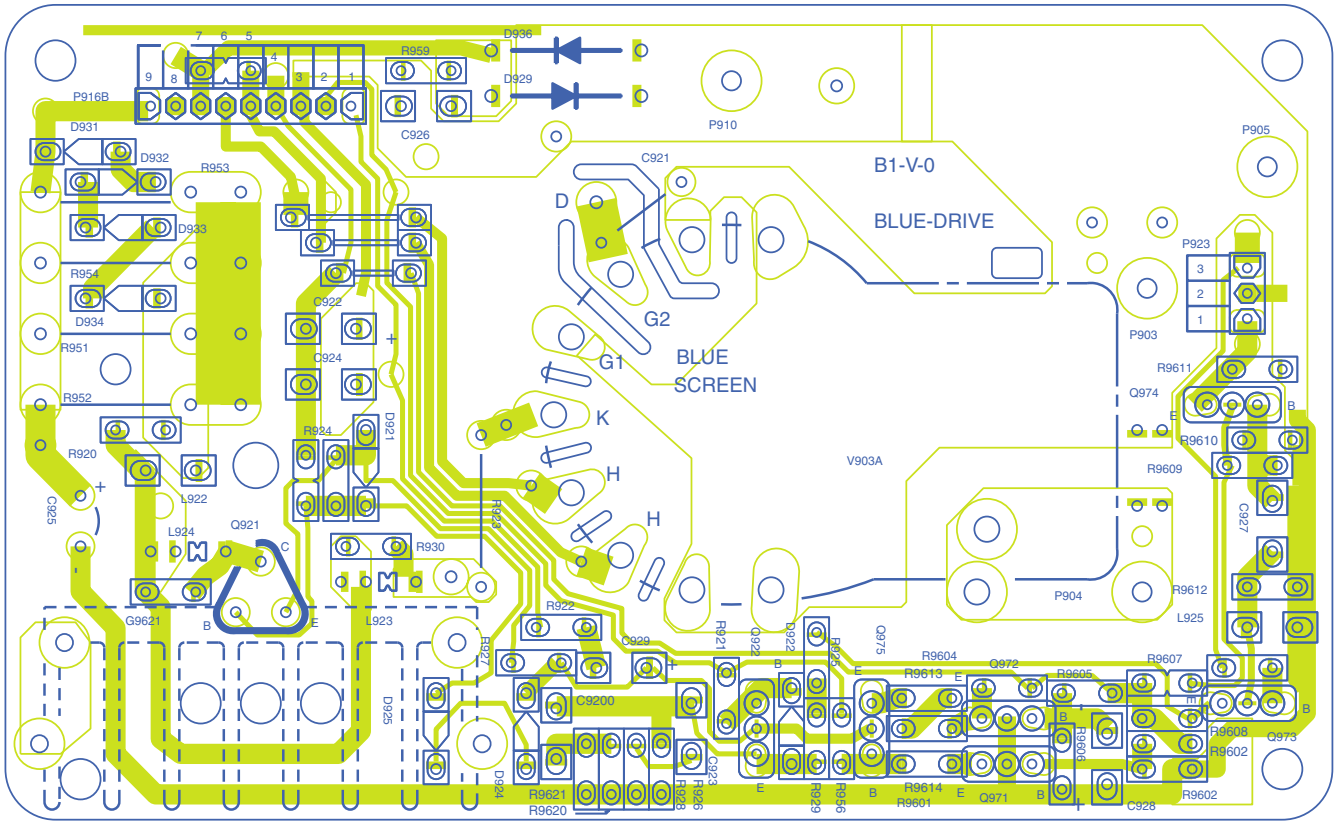
CRT DRIVE(GRN) BOARD PD0080G2 (E032Z)

BOTTOM (FOIL) SIDE



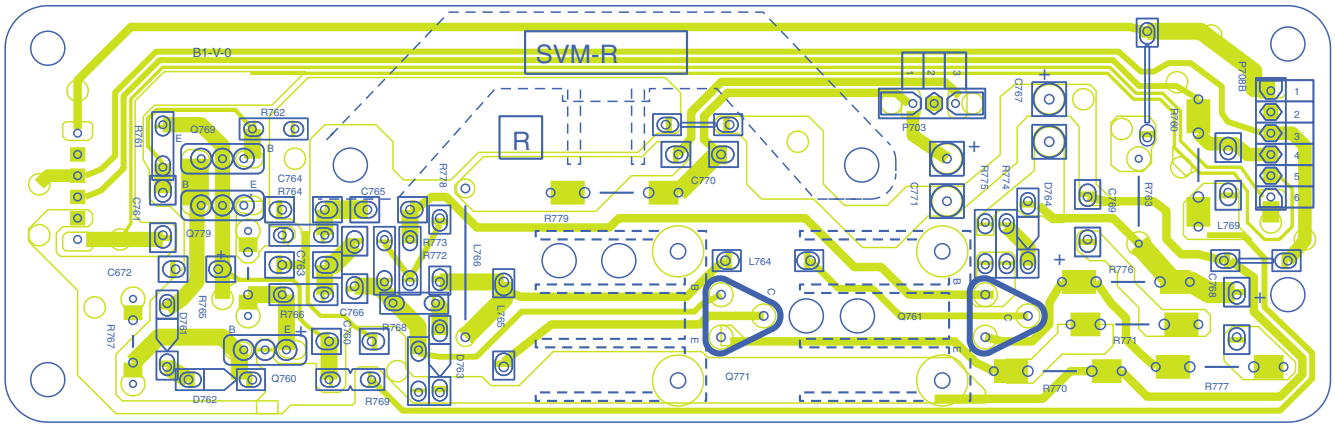
CRT DRIVE(BLE) BOARD PD0080G3 (E033Z)

BOTTOM (FOIL) SIDE



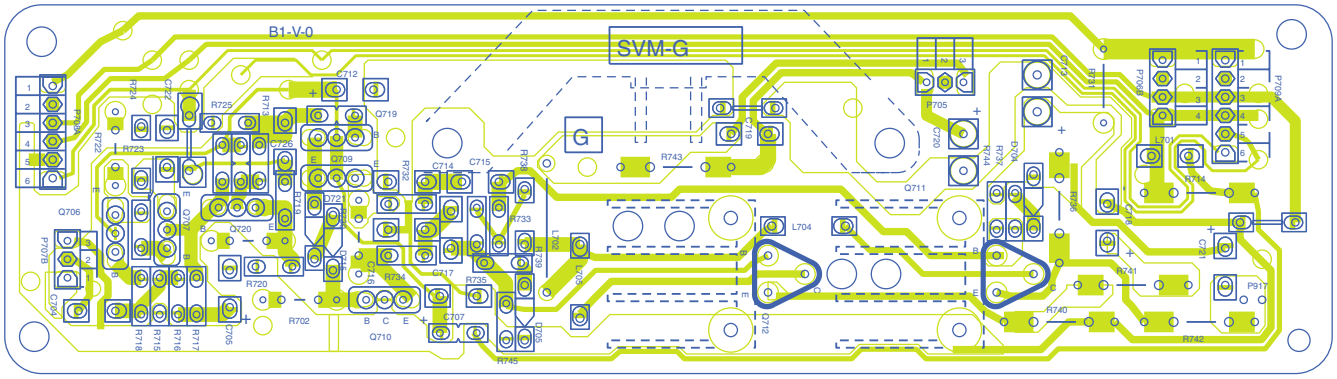
SVM-R BOARD PD0080G4 (E034Z)

BOTTOM (FOIL) SIDE



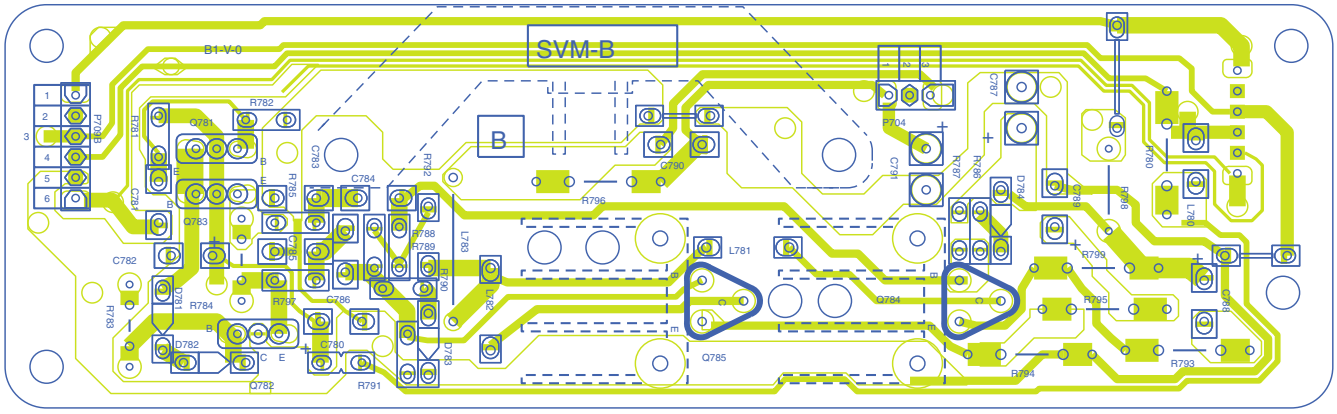
SVM-G BOARD PD0080G5 (E035Z)

BOTTOM (FOIL) SIDE



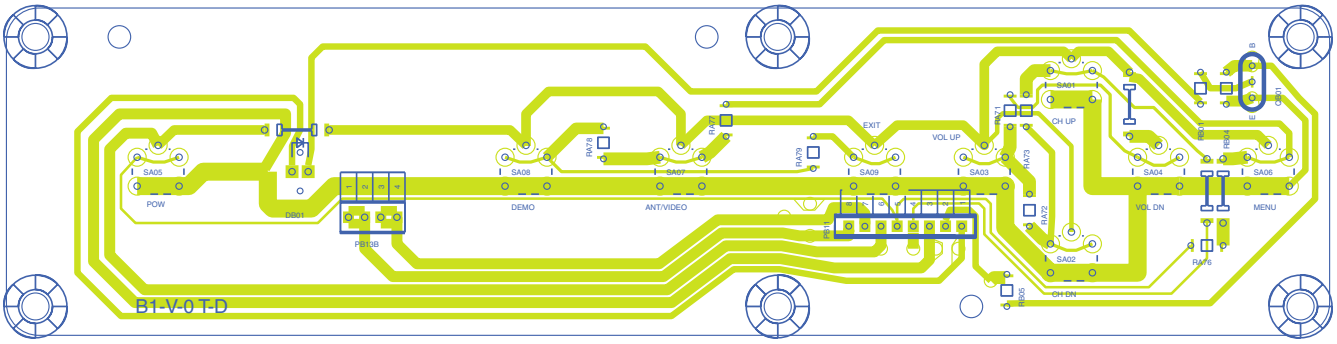
SVM-B BOARD PD0080G6 (E036Z)

BOTTOM (FOIL) SIDE



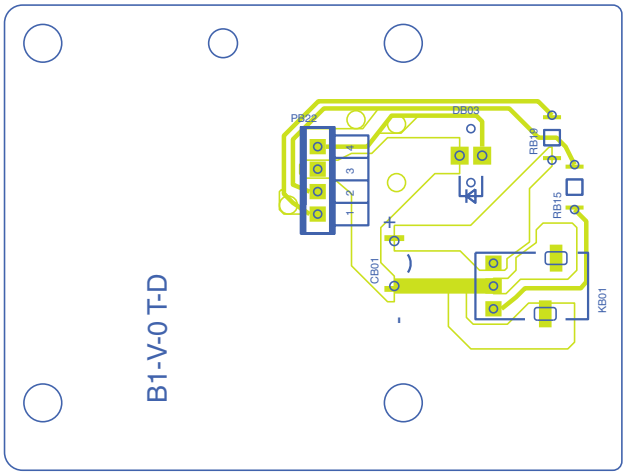
FRONT BOARD PD0081-1 (E041Z)

BOTTOM (FOIL) SIDE



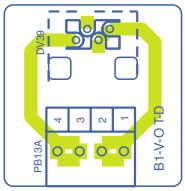
FRONT BOARD PD0081-3 (E043Z)

BOTTOM (FOIL) SIDE



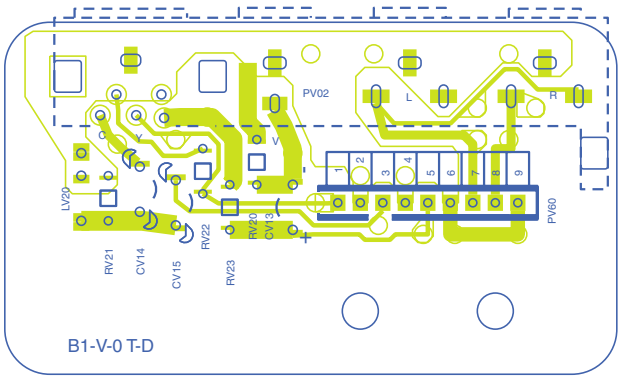
FRONT BOARD PD0081-4 (E044Z)

BOTTOM (FOIL) SIDE



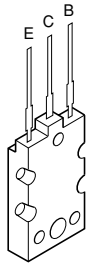
FRONT BOARD PD0081-2 (E042Z)

BOTTOM (FOIL) SIDE

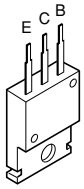


TERMINAL VIEW OF TRANSISTORS

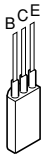
① 2SC5144
2SC5859



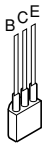
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



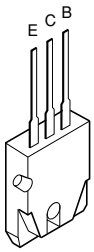
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



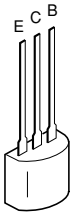
④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



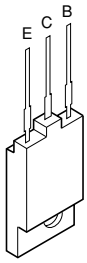
⑤ 2SA1788



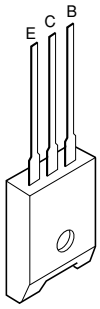
⑥ RN2203
RN2201
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SD2553
2SC5143



⑧ ON4409



SCHEMATIC DIAGRAM

MODEL : 50H82/65H82 - REVISION 1 JULY 2004

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

NOTE:

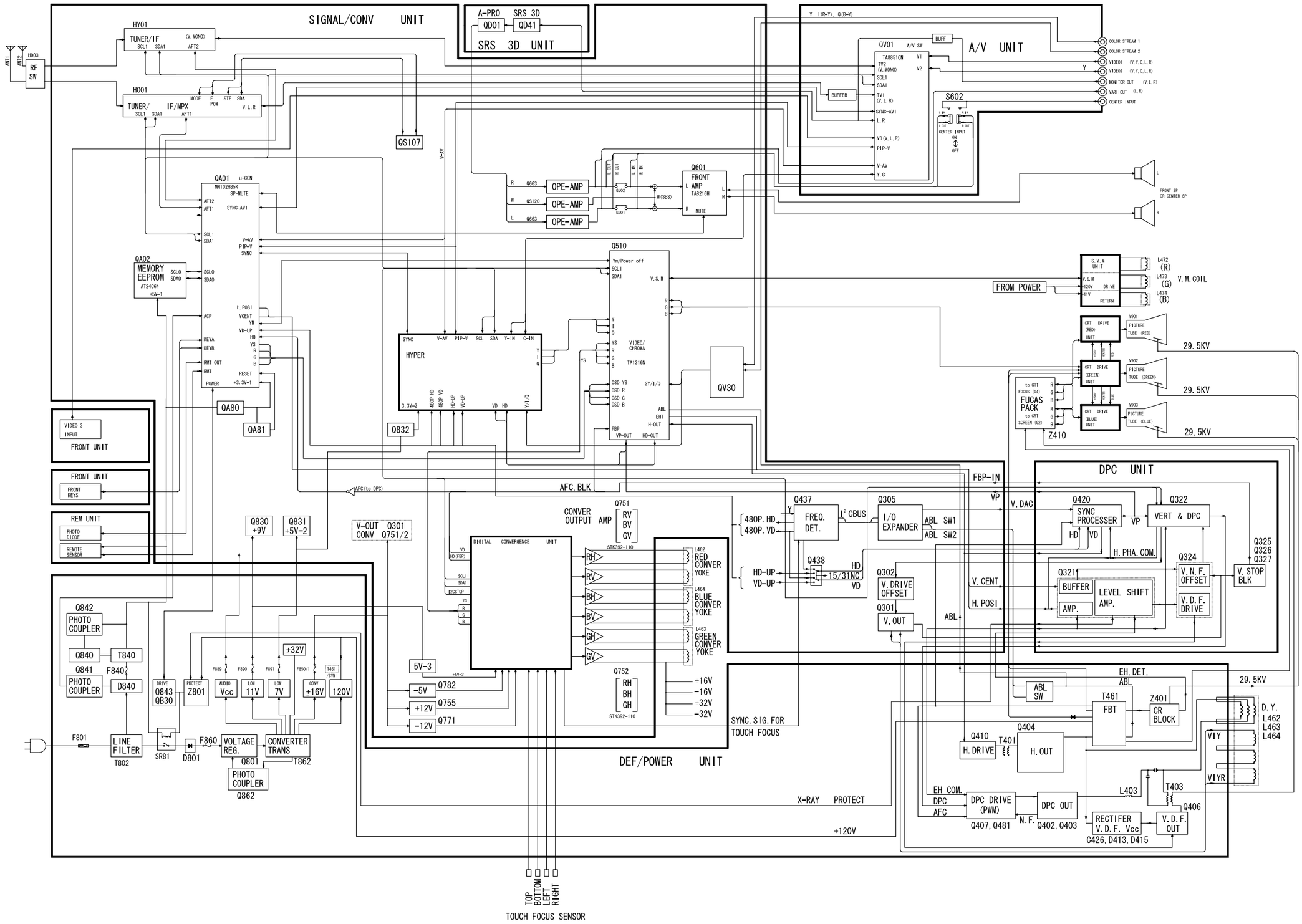
1. RESISTOR — Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   1/2R = Metal or Metal oxide of 1/2 watt
   1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt
   10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
2. CAPACITOR — Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF, and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   +| |— Electolytic capacitor Ⓜ| |— Mylar capacitor
3. The parts indicated with "⚠" have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage at 220 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

■ **SCHEMATIC DIAGRAM STRUCTURE:**

- SIGNAL / CONVER Circuit
  - (Conver) [SHEET - 1/7] 1/16
  - (Defrection) [SHEET - 2/7] 2/16
  - (If) [SHEET - 3/7] 3/16
  - (Maicom) [SHEET - 4/7] 4/16
  - (Power) [SHEET - 5/7] 5/16
  - (Audio) [SHEET - 6/7] 6/16
  - (Video) [SHEET - 7/7] 7/16
- POWER / DEF Circuit
  - (Power) [SHEET - 1/2] 8/16
  - (Defrection) [SHEET - 2/2] 9/16
- DPC Circuit 10/16
- DIGITAL CONVER Circuit
  - (1/2) [SHEET - 1/2] 11/16
  - (2/2) [SHEET - 2/2] 12/16
- AV Circuit 13/16
- SRS3D A-Pro Circuit 14/16
- FRONT / T. FOCUS-SENSOR Circuit 15/16
- CRT / SVM Circuit 16/16

CIRCUIT BLOCK DIAGRAM

REVISION 1 - JULY 2004



DIGTAL-CONVER
PD0638

(PH002)

(PH001)

REVISION 1 - JULY 2004

50H82/65H82

SIGNAL/CONVER (Conver)

SHEET-1/7

ITEM / MODEL	R7889	R7888
42H81/43H71/43HK71 53H71/53HK71 50H71/50H81/50HX81	18K	18K
57H81/57HX81/61H71 65H81/65HX81	33K	33K

TO DPC PD0077(P350)

H_PHA_DAC HD_DEF VD_DEF V_PHA_DAC FREQ_SW 12V AFC_DEF H_DRIVE HV_DET_OUT HV_COMP SCL1 SDA1 VP V_STOP_BLK 16V V_CENT HV_DET -16V V_DRIVE FREE_RUN V_NF GND 9V DF_DRIVE V_PARA

P410 SOCKET BB-25P

B603 B602

+9V

7-B8 BLK_UP
7-A8 VD1_OUT
7-A8 48IP
7-B8 VD1_OUT

L450 100u

C454 50V1.0u
R4532 4.7k
R4542 33
R4533 330
C455 B25V0.01u
C452 16V330
C453 B25V0.022u
X4401 TR21023
R4538 2.2k
R4539 4.7k

Q437 TA1318N

Q436 2SC2712Y
7-C8 Y1
R4528 1k

C456 50V1.0u
C467 50V1.0u
R4527 1k
1-B1 ASY
R4517 1k
R4537 OPEN
R4518 OPEN
HD_IN

R4535 470
R4534 470
R4502 4.7k
SCL1
SDA1
G40

R4536 4.7k
R4545 100
R4546 100

+5V_2
G41
C469 16V10u
Q438 MC14053B
C460 B25V0.01

7-C8 HD_IN
4-B3 7-C8 VD_IN

R4525 10k
D416 MA111
BLK_UP
V_STOP_BLK
V_OUT_BLK
D305 MA111

R4521 2.2k
R4522 10k
R4523 1k
Q434 2SC3473Y-L
AFC
D415 OPEN
Q435 2SC3473Y-L
R4524 10k
R4526 OPEN
R4529 OPEN
C466 OPEN

L410 12u

R4505 22k
R4503 2.2k
Q431 2SC3437Y-L
R4507 68k
Q432 2SC3473Y-L
C462 100p
R4506 10k
D420 MA111
R4516 1k

C458 16V220u
C464 0.01u
D417 MA8100-M

R4508 2.2k
R4509 1k
C457 50V1.0u
R4515 68
R4514 470
R4513 2.2k
C459 25V0.1u
C465 0.01u
D418 MA8100-M
C463 B25V0.01

CONV_ABL VP AFC ABL 12V

Q439 RN1401
C468 OPEN

+5V_2
C313 16V22u
R317 4.7k
R316 OPEN
R301 4.7k
R318 4.7k
R313 4.7k
R319 OPEN

Q305 JLC1562BFEL

D306 MA8062-M
R309 470
R311 470
R310 4.7k
R320 1k

SDA1
SCL1

DIG 7-B8
DVD 7-F1

Q302 2SA1162-Y
R304 1k
C303 0.047u
Q301A
R302 1k
R303 1k

Q301 LA7833S

C301 50V100u
C304 50V1.0u
C305 TF0.22u
C302 50V100u
D306 100V4700p
R305 1/2W 1R2J
C311 470p
C307 0.033u
R308 R309
D303 ERB12
D304 ERB12
R314 10k
R315 10k
D302 SC570ALFE2
D301 EU2A
C308 50V100u
L305 TEM2014
L304 TEM2011
C309 100V0.047u
C312 16V10u
R312 10k
R306 1R150
R307 1R0.82
TP-G TP-V
V_OUT
V_NF

L302 TLN3296D
L303 TLN3296D

+5V_2
C862 330p
R862 10k
Q861 2SC3437Y-L
R864 3.3k
R865 3.3k
D861 MA111
GD-H 4-B3

SCL1 SDA1 V_CENT H_PHA_DAC
1-B1 1-A3 1-B1 4-B3 6-B3 7-A8
4-A3 4-A3

12V 1-D1 2-E4 6-D2

BB30 8P 2.5PJ-P

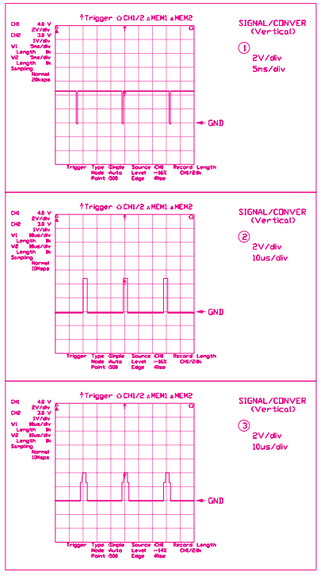
HV_DET_OUT
HV_DET
ABL
GND_DEF
H_DRIVE
12V
GND_DEF
AFC
TO DEF/POWER PD0640(BB31)

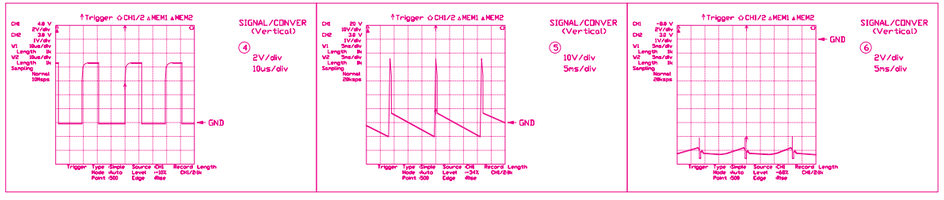
DF_DRIVE
V_OUT
V_OUT
V_NF
V_NF
HV_COMP
FREQ_SW
V_PARA
ABLSW2
CONV_ABL
+16V
+16V
CONV GND
CONV GND
CONV GND
CONV GND
TO DEF/POWER PD0640(BB31)

BB20 BB 16P BLUG

7-D5 CONV_ABL
7-D5 VP
7-D5 AFC
7-D5 ABL
7-D5 12V
7-D5 +16V
7-D5 +16V
7-D5 GND

1-A1 1-A1 1-A1 7-B8 DIG/DVD



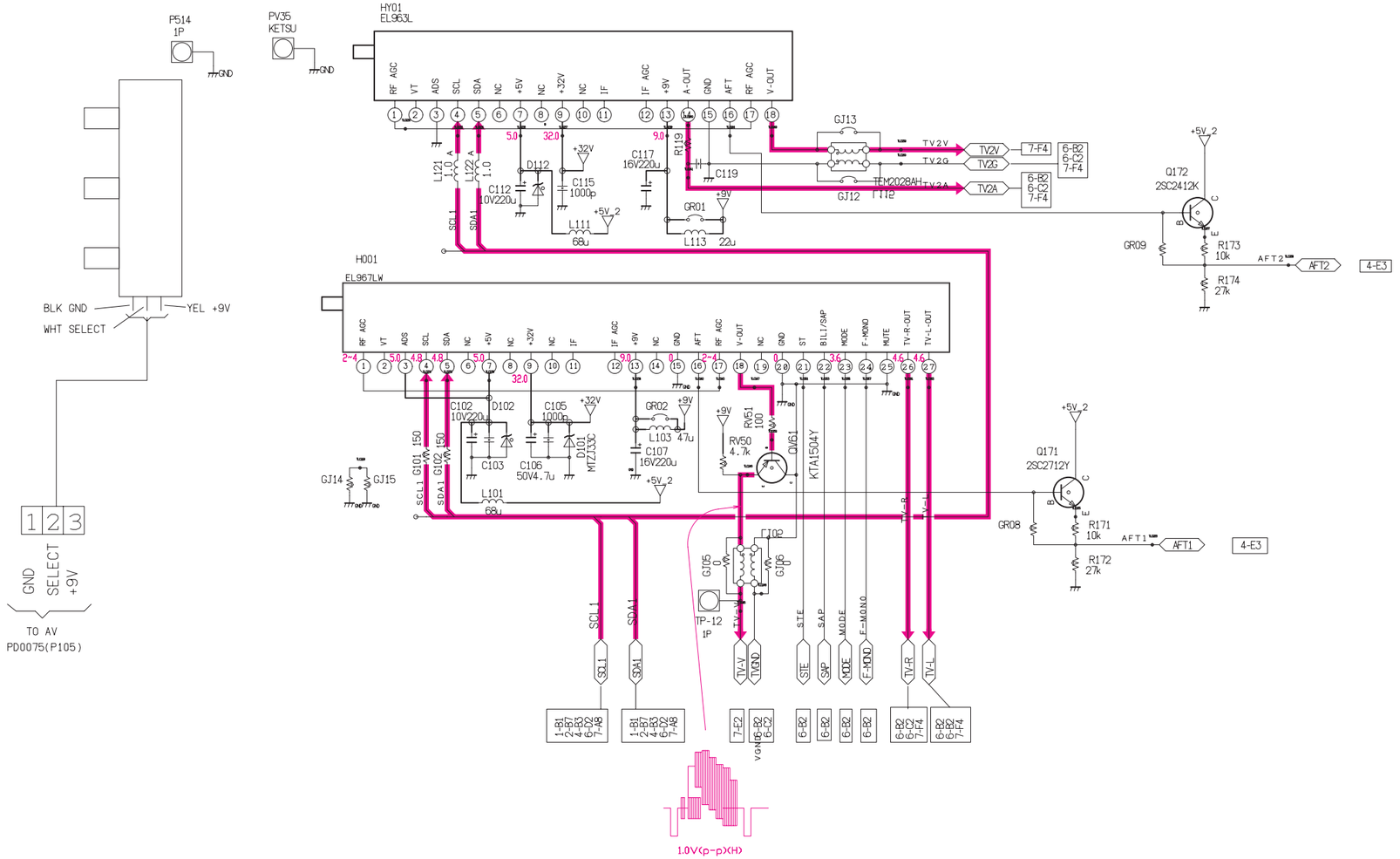


REVISION 1 - JULY 2004

50H82/65H82

SIGNAL/CONVER (Defrection)

SHEET-2/7

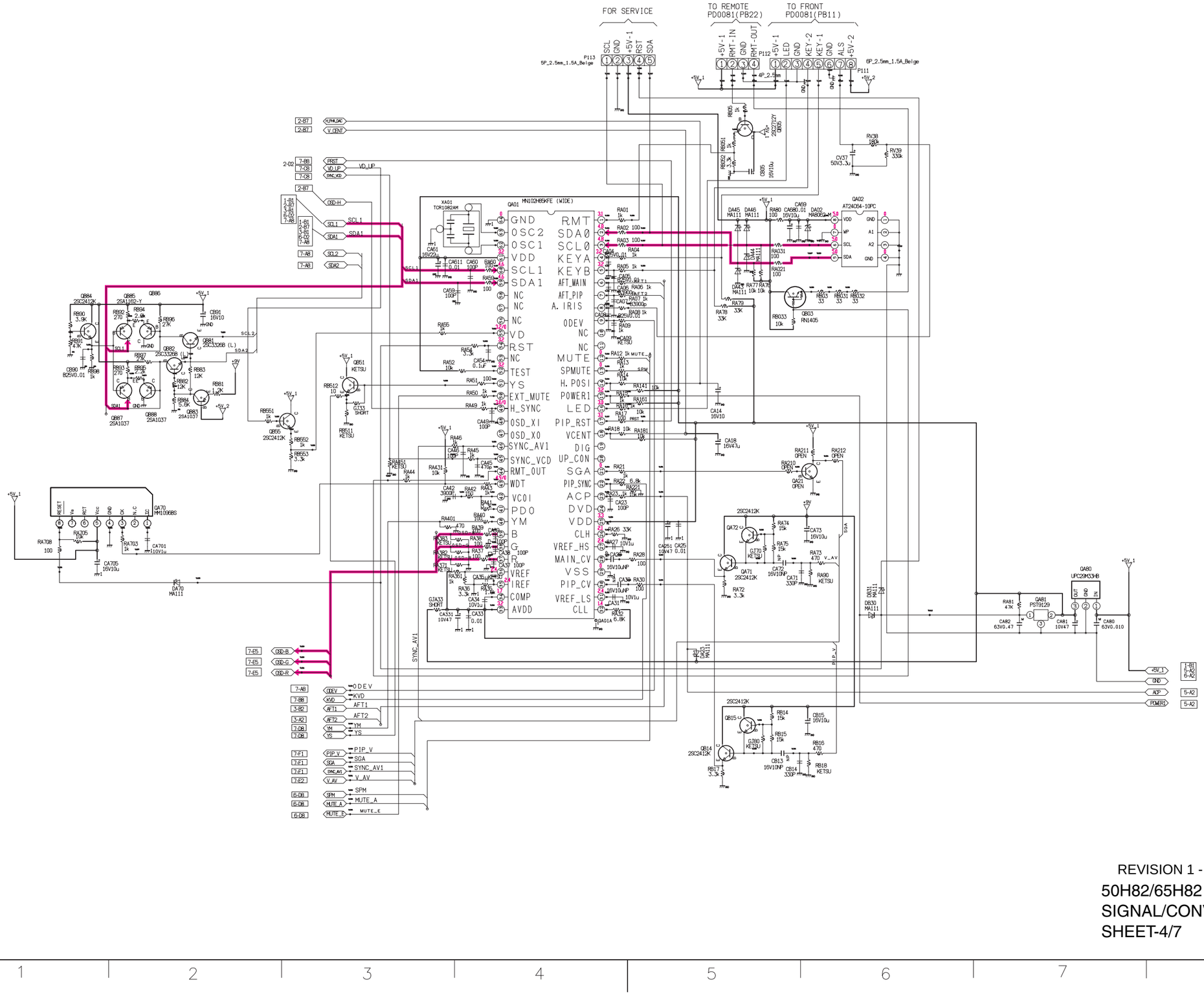


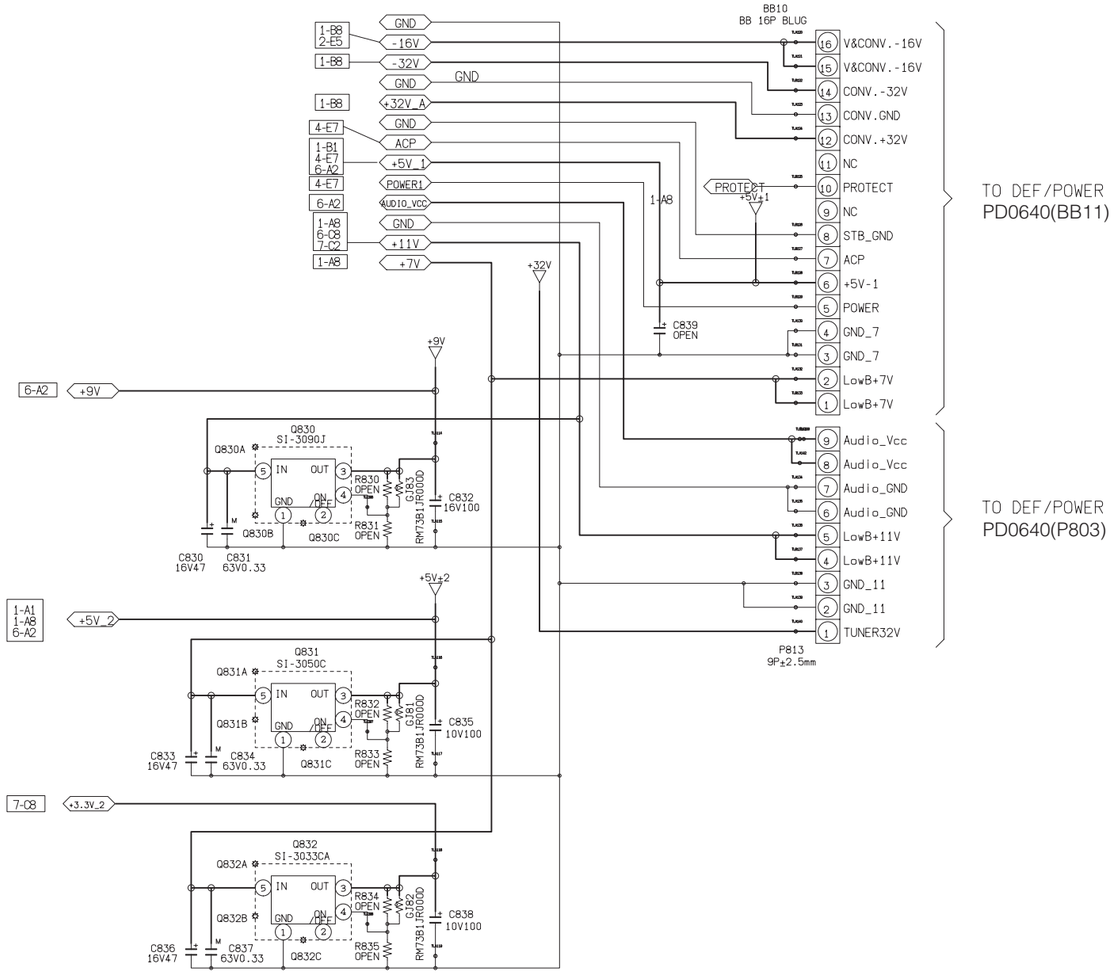
REVISION 1 - JULY 2004

50H82/65H82

SIGNAL/CONVER (IF)

SHEET-3/7


FOR SERVICE
TO REMOTE PD0081(PB22)
TO FRONT PD0081(PB11)
P113
P112
P111
5P_2.5mm_1.5A_Beige
4P_2.5mm
6P_2.5mm_1.5A_Beige
SCL
GND
+5V-1
RST
SDA
RMT-IN
RMT-OUT
+5V-2
LED
KEY-1
KEY-2
ALS
XA01
TCR1082AM
QA01
MN102H89KFE (WIDE)
GND
OSC2
OSC1
VDD
SCL1
SDA1
NC
NC
NC
VD
RST
NC
TEST
YS
EXT_MUTE
H_SYNC
OSD_XI
OSD_XO
SYNC_AV1
SYNC_VCD
RMT_OUT
WDT
VCOI
PDO
YM
B
G
R
VREF
IREF
COMP
AVDD
RMT
SDA0
SCL0
KEYA
KEYB
AFT_MAIN
AFT_PIP
A.IRIS
ODEV
NC
NC
MUTE
SPMUTE
H.POSI
POWER1
LED
PIP_RST
VCENT
DIG
UP_CON
SGA
PIP_SYNC
ACP
DVD
VDD
CLH
VREF_HS
MAIN_CV
VSS
PIP_CV
VREF_LS
CLL
QA02
AT24C04-10PC
VDD
WP
SCL
SDA
GND
A1
A2
QA80
UPC29M33HB
OUT
GND
IN
QA81
PST9129
QA70
HM1096BS
RESET
Vo
RCT
Vcc
GND
CK
N.C
NC
IR1
DA70
MA111
QB84
2SC2412K
QB85
2SA1162-Y
QB86
QB91
16V10
QB90
B25V0.01
QB87
2SA1037
QB88
2SA1037
QB82
2SC3326B (L)
QB81
2SC3326B (L)
QB83
2SA1037
QB65
2SC2412K
QB51
KETSU
GJ33
SHORT
QA72
2SC2412K
QA71
2SC2412K
QB15
2SC2412K
QB14
2SC2412K
QA21
OPEN
QB03
RN1405
SYNC_AV1
P I P_V
SGA
V_AV
SPM
MUTE_A
MUTE_B
MUTE_E
ODEV
KVD
AFT1
AFT2
YM
YS
+5V_1
GND
ACP
POWER1
REVISION 1 - JULY 2004
50H82/65H82
SIGNAL/CONVER (Micom)
SHEET-4/7



REVISION 1 - JULY 2004

50H82/65H82

SIGNAL/CONVER (Power)

SHEET-5/7

HY01
(Sub Tuner)

H001
(Main Tuner)

AV
(PD0075)

REVISION 1 - JULY 2004

50H82/65H82
SIGNAL/CONVER (Audio)
SHEET-6/7

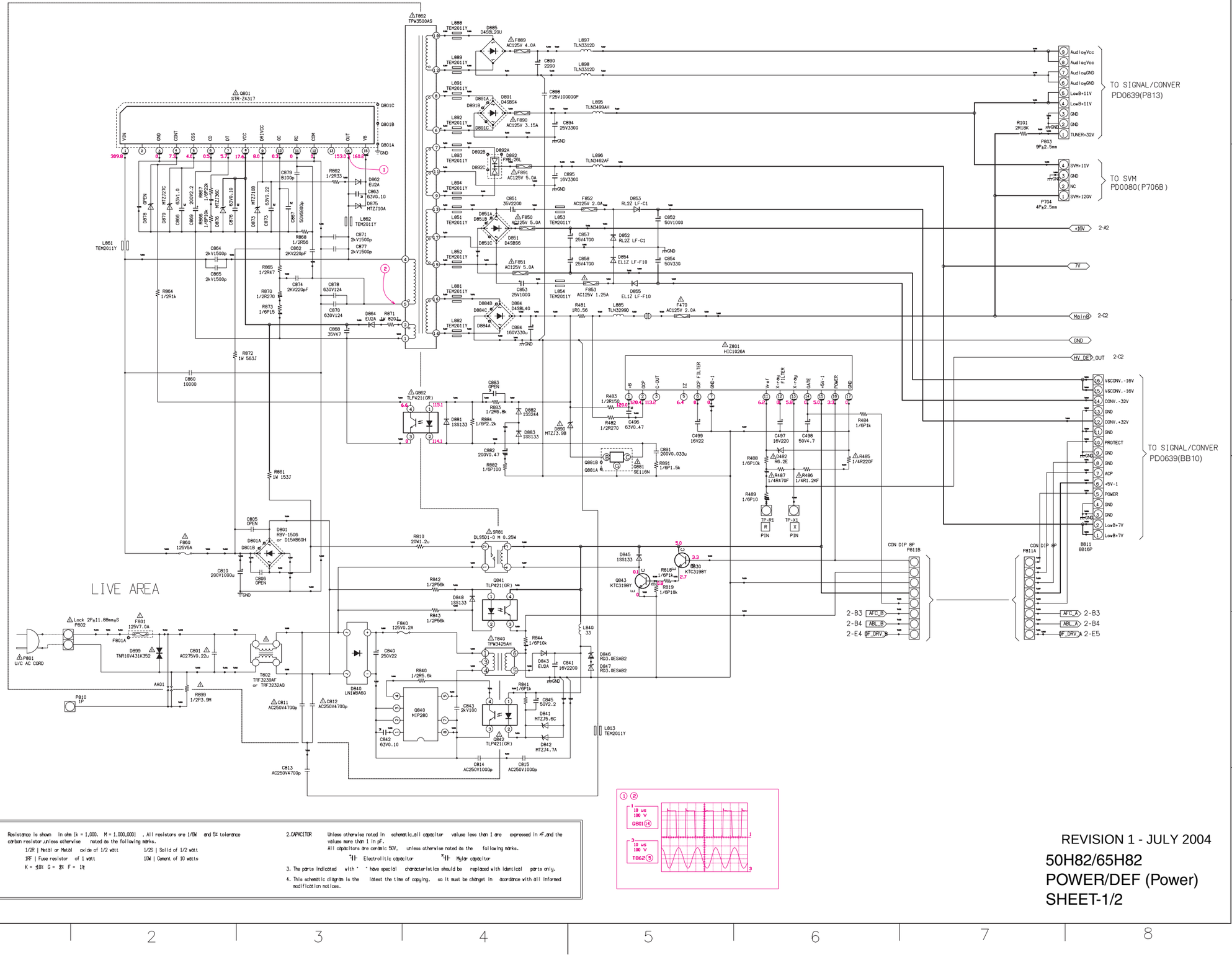
UZ01
MVPU14

NEXT HYPER

P540 SOCKET 56P

REVISION 1 - JULY 2004
50H82/65H82
SIGNAL/CONVER (Video)
SHEET-7/7

AV
PD0075



NOTE)

1. RESISTOR Resistance is shown in ohm (k = 1,000, M = 1,000,000) . All resistors are 1/6W and 5% tolerance carbon resistor,unless otherwise noted as the following marks.
   1/2R | Metal or Metal oxide of 1/2 watt
   1/2S | Solid of 1/2 watt
   1RF | Fuse resistor of 1 watt
   10W | Cement of 10 watts
   K = ±10% G = ±2% F = ±1%

2. CAPACITOR Unless otherwise noted in schematic,all capacitor value less than 1 are expressed in nF,and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   Electrolitic capacitor
   Mylar capacitor

3. The parts indicated with * have special characteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying, so it must be changed in acordance with all informed modification notices.

TO SIGNAL/CONVER PD0639(BB10)

TO SIGNAL/CONVER PD0639(BB10)

TO CRT-DRIVE(GREEN) PD0080(P917)

BB21 BB 16P SOCKET

BB31 8P2.5PJ-P

5P_2.5mm_1.5A_Beige P404

TO CRT-DRIVE

Focus Pack

PLUG 3P_5mm P405

POWER/DEF (DEF)

① H_DRIVE 1V/div 10us/div

② 5V/div 10us/div

③ 5V/div 10us/div

④ 5V/div 5ms/div

⑤ 50V/div 10us/div

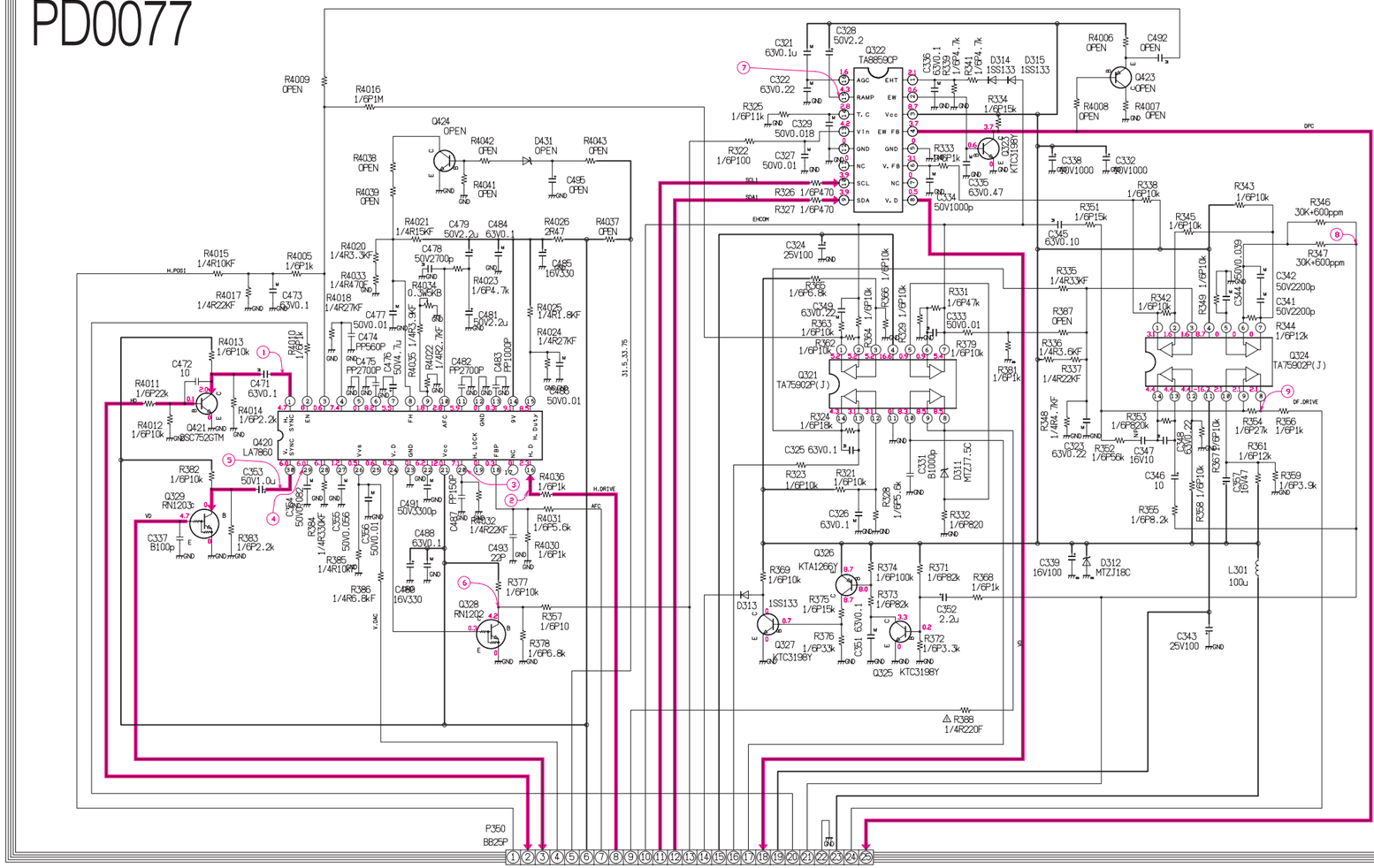
⑥ 200V/div 10us/div

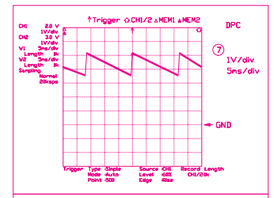
⑦ 200V/div 5ms/div

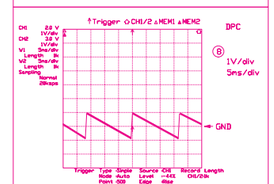
REVISION 1 - JULY 2004

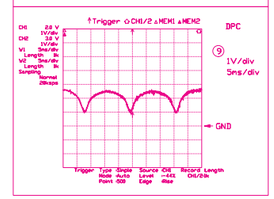
50H82/65H82
POWER/DEF (Deflection)
SHEET-2/2

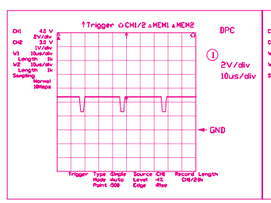
DPC
PD0077

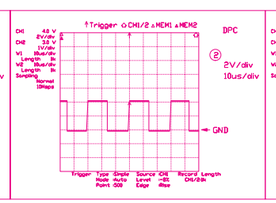


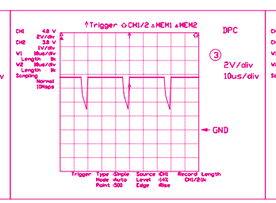


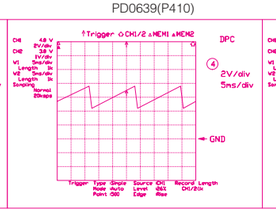


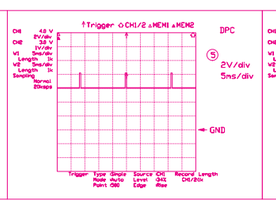


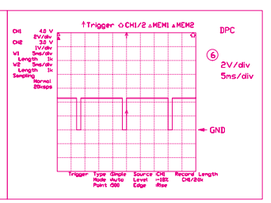












REVISION 1 - JULY 2004

50H82/65H82
DPC

AREA 1

AREA 2

REVISION 1 - JULY 2004

50H82/65H82
DIGITAL CONVER
SHEET-1/2

AREA 3

PD0079
TO TOUCH FOCUS SENSOR

PH004
PLUG 8P

CD0031AM

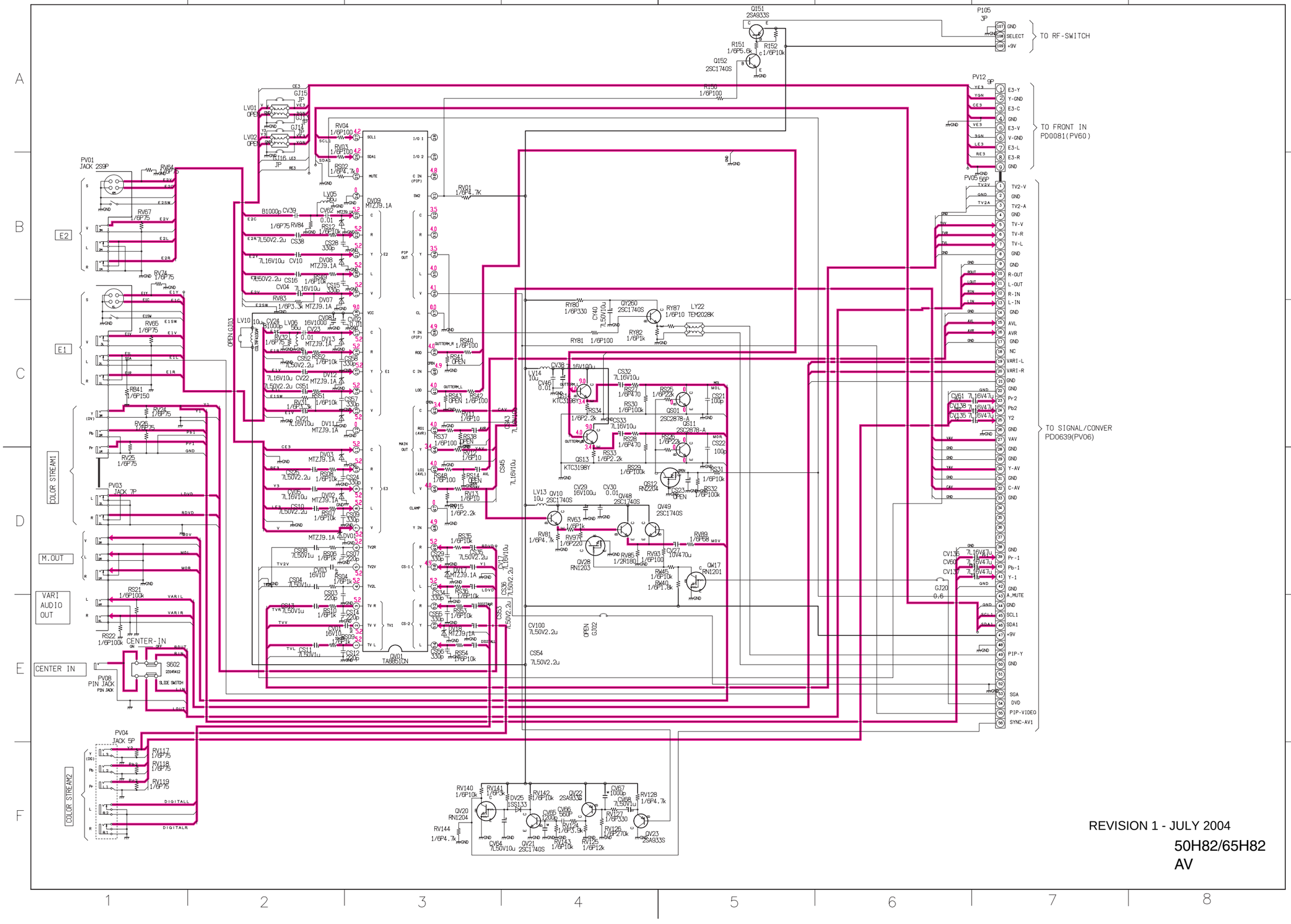
TO SIGNAL/CONVER PD0639(P708)

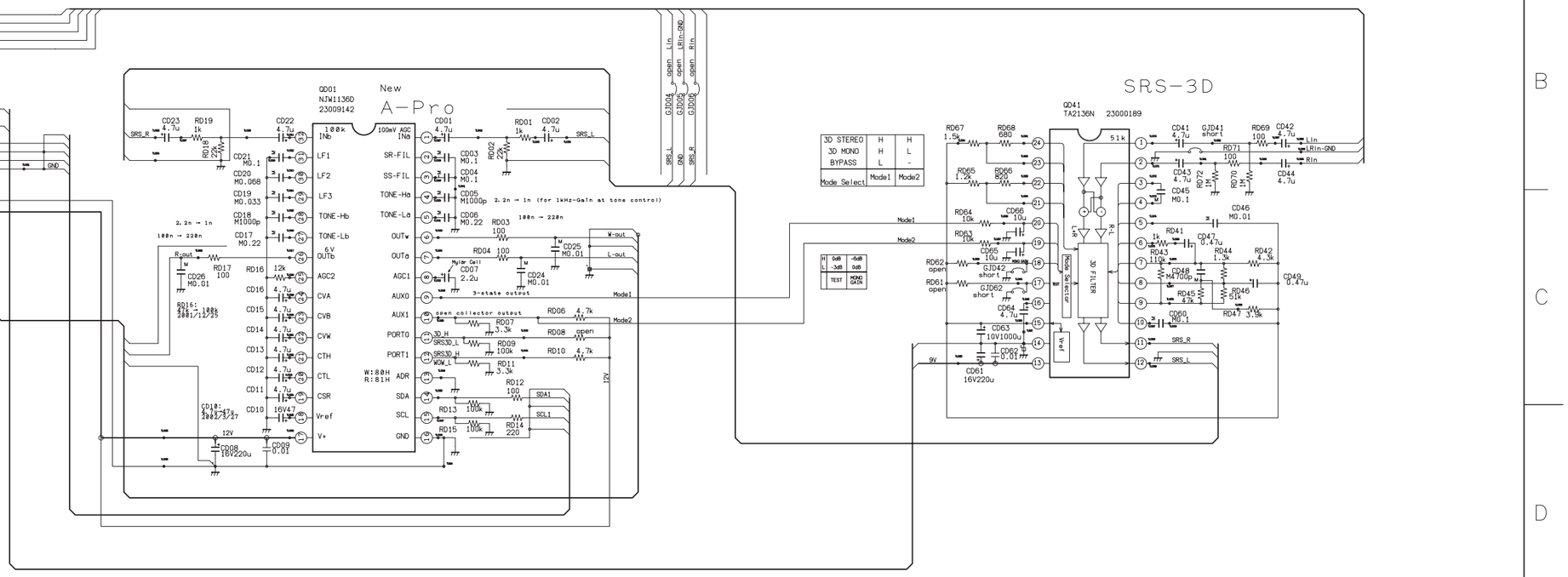
CONNECTOR15P

WCKHD
ADCKVD

REVISION 1 - JULY 2004

50H82/65H82
DIGITAL CONVER
SHEET-2/2


TO RF-SWITCH
TO FRONT IN PD0081(PV60)
TO SIGNAL/CONVER PD0639(PV06)
COLOR STREAM1
COLOR STREAM2
M.OUT
VARI AUDIO OUT
CENTER IN
E2
E1
REVISION 1 - JULY 2004
50H82/65H82
AV

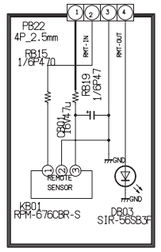


REVISION 1 - JULY 2004

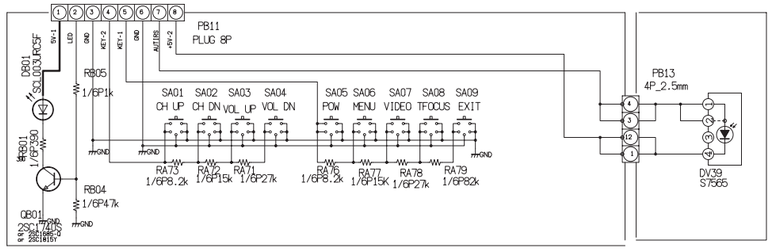
50H82/65H82

SRS3D A-Pro

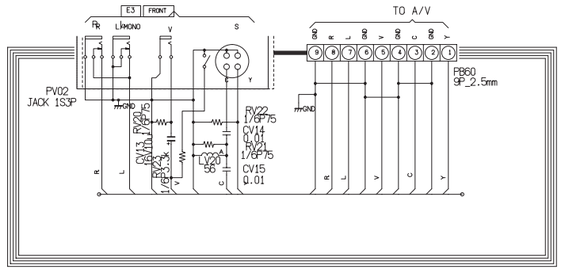
E043Z
REMOTE



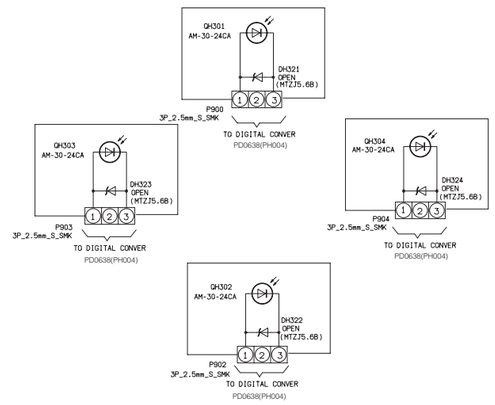
E041Z
FRONT-CONTROL



E044Z
ALS
(Ambient Light Sensor)



E042Z
FRONT-IN



REVISION 1 - JULY 2004

50H82/65H82
FRONT/T. FOCUS-SENSOR

CRT-D/R
PD0080-1

CRT-D/G
PD0080-2

CRT-D/B
PD0080-3

SVM/R
PD0080-4

SVM/G
PD0080-5

SVM/B
PD0080-6

REVISION 1 - JULY 2004

50H82/65H82

CRT/SVM